

Knut Vaage:

multiMORF VI

for

amplified solo trumpet in C, 4 amplified brass instruments* and computer
(*Trumpet in C, Horn in F, Trombone, Tuba)

2020

(version 16th of September 2022)

to Erlend Aagaard-Nilsen and NyNorsk Messingkvintett

Programming and processing by Thorolf Thuestad. Visuals by Evelina Dembacke

ACKNOWLEDGMENT:

multiMORF VI is a part of the project *multiMORF remix*, started on initiative from NyNorsk Messingkvintett. The piece is a remix of *multiMORF IV* commissioned by Erlend Aagaard-Nilsen, premiered at BrassWind 2013 by Erlend Aagaard-Nilsen and 9 players from Manger Brass Band. *multiMORF remix* contents of *multiMORF V, VI* and *VII*

TECHNICAL NEEDS:

Full quadraphonic PA with sub, 6 microphones (1 mic. on each band instr., 2 mics on solo trumpet), a computer, and a multi-channel sound card is required
Extra: Egg slicer for Tuba, and optional small bells for Trombone (optional simulate bell sound by strokes on harmon-mute)

ABOUT THE NOTATION OF THE SCORE:

Score is transposed (Horn in F is the only transposing instrument). Accidentals apply for each note only
For detailed info: see Explanation on following pages

DURATION: ca 20 min

Commissioned by NyNorsk Messingkvintett

First performed at BrassWind 2020 by Erlend Aagaard-Nilsen and NyNorsk Messingkvintett

Financed by

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More info: www.knutvaage.com



NORSK
KULTURFOND
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EXPLANATION:

General instruction:

This piece gives all the involved performers freedom to improvise inside the “rules” given in score.

The score is structured into 10 pages. There are no parts available. All the players must get a copy of the score. The soloist will decide if some pages should be played more than one time, and if so, in what order, otherwise, follow page order. The duration of each page can be from 1 to 3 min, and should differ if played more than one time.

Inside each page there are senza misura bars. The soloist will give cues (following the score order). The length of each senza misura bar (between 5 sec. and 1 minute) is from choice of the soloist.

The duration of the whole piece may differ between 15 to 30 minutes adjusted to the performance situation.

SIGNS AND ABBREVIATIONS:

—————>	continuous sound (Brass: breath when needed, stagger breathing. Optional circular breath)
REP—————>	repeat the previous action
—GRAD. TO—>	gradually changed into (e.g. transform by little by little mixing next action more and more into previous action. The performer may vary the way of mixing or “morphing”)
—————>FADE	keep note until “FADE”, and fade from that point during next cue
KEEP ALL—————>	(electronics only) gradually making a chord by keeping all notes from given scale
—————	continuous sound no more than one breath per action
<i>f(pp)</i>	double dynamic (first one indicate how to play and how to sound in PA, next one (in bracket) sound level without amplification)
DM:0-AW:	distance to microphone from zero to away from mic, e.g:
DM:0	as close as poss. (brass: optional inside bell)
DM:2	distance to mic. 2 cm
DM:10	distance to mic. 10 cm
DM:AW	away from mic. (outside mic. range)

Very soft sounds can be rich and full because of microphones. It is important to follow the score instructions for distance to microphones.

The solo part is rhythmically free from the brass band. Even so it is necessary to keep track on what the band is doing to give cues

The given material indicates what and how to play. When GRAD. TO, arrow is used, change the material from the first to the second phrase - before and after the arrow (see above)

When repeating a notated cell, differ the length, and the start/stop point.

The technical informations are always connected to the notated cell, so that the player must switch back and forth the different settings while morphing.

Solo trumpet in C:

Follow instruction for brass ensemble below

The soloist will have two mics; one for effects and one for amplification

ABBREVIATIONS (soloist only):

Sosu: soft sub sound (less vibration in lips, extremely slow air stream)

3,2,1... like 1,2,3... below, but start with the whole gesture, reduce according to instruction

ELECTRONICS:

It is possible to perform the piece without the soloist having an electronic solo part

If the soloist electronics is used, a midi-pedal with following programming will be needed:

I Delay (surround)

II Ring buffer

III Freq. shifter

IV Sustainer

Brass ensemble:

ABBREVIATIONS:

1,2,3... notated w. dotted bows, optional repeat of phrase according to bow instructions

Cm: cup mute

Cmc: cup mute closed

Hm: harmon mute (on Horn in F, opt. use a harmon for Bass Trombone)

Wah: harmon mute, tube in

T.O: remove tube from harmon mute

Fm: fibre mute

Fmc: fibre mute closed

Prm: practicing mute

Pm: paper mute: press a suitable paper w. hand firmly and flat on top of bell, optional stiffer on bigger instruments (paper mute is not used on Tuba)

sB: snap w. nail on bell or harmon mute to get bell sound (not used for soloist)

blA: blow air

Lscr: lip scratch: lips firmly pressed and slow air stream to make sound similar to Vln. scratch

LflzA: lip flutter w.air: flutter w. lips (softly pressed), small distance to mouthpiece to avoid tone

LflzH: lip flutter, harmon mute

LflzW: lip flutter, wah-wah mute

TflzA: tongue flutter w. air

TflzW: tongue flutter, wah-wah mute

LTflzA:	combine lip and tongue flutter w. air
LTflzW:	combine lip and tongue flutter, wah-wah mute
LTflz:	Tuba only (hand muting not possible on Tuba)
2off/2on:	take off/put on valve slide on 2de valve
PFs:	blow as pan flute into tuning slide (if greasy, lips can have 1 mm distance)
PFi:	Solo Trumpet only: blow air into instrument while fingering the melody
vS:	valve sound: the sound from pressing and lifting the valve, listen to both. The action must be firmly, but not too fast (Horn: hit kept metal object w. valve mechanic)
vCl:	valve click: make perc-sound with valves (might be a given pitch; fingered as if played)
tG:	tuning gliss: gliss. by using 3. valve (tuning) slide trigger
1/2:	half valve gliss: press all valves half way down to make it poss. with full range gliss.
Fp:	finger pop: pop on mouthpiece (on instrument) w. flat fingertips
Hp:	hand pop: pop on mouthpiece (on instrument) w. inside of flat hand
Tp:	tongue pop: make "popping" sound by rapidly/firmly "releasing" tongue from palate (resonance into instr., but no normal sound)
Lp:	lip pop: make "popping" sound by rapidly/firmly "releasing" lips from each other (resonance into instr., but no normal sound)
SLt:	slap tongue
MP:	mouthpiece only
MP...hiH:	mouthpiece only, highest possible, into "cave" made by muting hands
IwoA:	instrument without mouthpiece, blow air into instr.
Lsm:	lip smack: make sharp, very short kissing sound 1mm from mouthpiece
Msm:	mouthpiece smack: make sharp, very short kissing sound directly on mouthpiece (possible with or without instrument connected)
Kss:	kissing sustained sound: very slow "kissing" of mouthpiece, slow air stream
fund:	fundamental tone: 1 st partial of the harmonic row (varies when pressing valves)
reach fund:	(Trumpet only) try reaching the fundamental. Normally outside instr. range (removing valve slide on 2de valve can make it easier)
hi.s. ad lib.:	high spectrum ad lib: grip fundamental tone in bracket, play highest reachable partials ad lib. Don't compensate for intonation (partials intonation)
S.R.:	suono reale: actual sound, not transposed
LWppl:	listen to/wait for previous player

Technical:

The brass instruments are treated by a computer with a patch programmed specially for this piece by Thorolf Thuestad. The technician needs to follow the conductor and the instructions in the score. The conductor gives cue for what page, and what senza misura bar.

The patch must be able to run a frame work for each page and directly switch from one page to another. The score indicate what effects that may be used on each page. Between the pages it may be necessary to keep sound in delay, or morph/transform from the active page to the next (given by conductor).

The multi-channel sound card receives the instrument into 6 routings:

- Routing 1: Solo Trumpet
- Routing 2: Trumpet 2
- Routing 3: Horn in F

Routing 4: Trombone
Routing 5: Tuba
Routing 6: loops made by the Tuba-player

PROGRAMMED EFFECTS:

Spectrum generator (spectrum analyzer to noise resonators)

Pitch shifter (no time correction)

Auto tune

Frequenze shifter (distortion)*

Surround delay*

Sustainer*

Reverb

Granulation

Filter bank (equalizer etc.)

Harmonizer (with and without pitch glide)

Sampler (diff. types - e.g. loop samplers)

Morpher (FFT)

Automatized cross fader

Ring modulator

Bit reducer

Analog overdrive simulator (vst plug-in)

Ring buffer*

Concat synthesis (to construct percussive modules)

*optional also controlled by soloist via midi-pedal



VISUAL TECHNIC:

In the *multiMORF remix** project Dembacke has been lowering her gaze, and the daylight has become the natural starting point for the visual design. The pandemic of 2020/2021 has provoked Dembacke to take a proper look at her local environment through the artistic process. To bring in nature, both as an ideal state and a destructive force, is the core element of the MultiMORF remix visual project.

Technical needs for the visual design:

- Computer with dedicated graphic card and live video software

Inputs:

MIDI controller with physical faders

Soundcard

Outputs:

Video signal to projector

- Projector and projection screen
- Lighting fixtures controlled by DMX lighting console



Score is transposed (Horn in F)

multiMORF VI

(version 1st of November 2021)

Knut Vaage

ROUTING:
I

Solo C Tpt alt 1

D.M:10
Fmc
hi. s. ad lib.
improvise on highest partials (quasi "seljefløyte": trad. folk flute w. partials only)
pp
(↺) (b↺) (b↺)
Fm off
one long note
small notes: alt. pitches w. rep.
2 off reach fund.
before next page
ELECTR. ONLY

Solo C Trpt alt 2

D.M:0
Irr
vS
Lp
vS
Tp
vS
Lsm
f(mp)
GRAD. TO
D.M:5
LflzA
mf
TflzA
mp
ossia
REP

Solo technic/Visual

SOLO ALT 1: DELAY AD LIB. (OPT. RING BUFFER)
SOLO ALT 2: RING BUFFER
SOLOIST ALT 2: CONCAT SYNTHESIS (CONSTRUCT PERC MODULE)
EFFECT 1: GENERATE HARMONIC SPECTRE FROM HN/TBN/TUBA FUNDAMENTALS
EFFECT 2: OUTPUT BRASS 8vb
EFFECT 3: SURROUND DELAY ON SMALL BELLS/HARMON-NAILS
LOOP FROM TUBA

SOLO ALT 1: GRAD. DISTURBED, FREQ. SHIFTER
SOLOIST ALT 1: GENERATE HARMONIC SPECTRE
HIGH SPECTRUM (high partials only)
fb10
BRASS INTO DELAY
BELLS: DELAY OFF
BELLS INTO SUSTAINER
fb90

Technical

GRAD. TO
GRAD. TO
FADE E. 2 (20 sec.)
LOOP GRAD. INTO GENERATOR

Trumpet 2

II
TUTTI BRASS:
D.M:5
2 off reach fund.
pp
bend
mp
REP
(TACET)
D.M:10
2 on
Fm
improvise on highest partials (quasi "seljefløyte": trad. folk flute w. partials only)
hi. s. ad lib.
Fm off
(TACET)

Horn in F

III
fund.
8vb
pp
bend
mp
REP
(TACET)
D.M:10
Fm
improvise on highest partials (quasi "seljefløyte": trad. folk flute w. partials only)
hi. s. ad lib.
Fm off
(TACET)

Trombone

IV
sB
improvise w. soloist, silent meditation, long rests
pp
bend
mp
REP
(TACET)

Tuba

V
opt. make loops on sound check
loop
bend
pp
mp
REP
(TACET)
D.M:10
Fm
improvise on highest partials (quasi "seljefløyte": trad. folk flute w. partials only)
hi. s. ad lib.
Fm off
(TACET)

Tuba loop

VI
BANK 1
PLAYBACK LOOP
pp

2

multiMORF VI

Solo alt 1

D.M:5
one long note
small notes: alt. pitches w. rep.

Lscr

ord.
(continuing pitch from start of 2)

GRAD. TO

GRAD. TO

GRAD. TO

D.M:0
Irr
vS Lp vS Tp vS Lsm
REP

Solo alt 2

D.M:5
LTflzA

LTflzAH

LflzA

TflzA

ossia
REP

one long note
small notes: alt. pitches w. rep.

Lscr

GRAD. TO

GRAD. TO

ord.

S.tech./Vis.

SOLO ALT 1: GRAD. DISTURBED, FREQ. SHIFTER

SOLO ALT 2: RING BUFFER

SOLO ALT 1: RING BUFFER

SOLO ALT 2: GRAD. DISTURBED, FREQ. SHIFTER

Techn.

(fade in E.1 15 sec.)

E.1: HARMONIC SPECTR. ON TBN.(RAISE AD LIB)

E.2: GRANULATION ON TBN. (+/- AD LIB)

E.3: CONCAT SYNTHESIS FOR BRASS vS

E.3: DELAY ON BRASS (- TBN)
fb:10, t: fader

E.3: INPUT OFF (FADE)

E.1&2: TBN: ADD SUSTAINER soft dynamic level

E.1&2: ADD GENERATOR & GRANULATOR

BRASS:
D.M:0

Trpt 2

LWppl
vS

SLOWLY

TP/Lp

GRAD. TO

(slap tongue)
SLt

(opt. use slap tongue ad lib.)

(TACET)

D.M:3
LTflzA

LTflzA

LflzA

TflzA

ossia
REP

Hn

p (ppp)

f (p)

D.M:3
LTflzA

LTflzA

LflzA

TflzA

ossia
REP

Tbn.

blA

ppp

D.M:3
Kss

(TACET)

D.M:3
LTflzA

LTflzA

LflzA

TflzA

ossia
REP

Tu

p (ppp)

f (mp)

Irr

vS Lp vS Tp vS Lsm

loop

SLt

REP

(TACET)

D.M:3
LTflzA

LTflzA

LflzA

TflzA

ossia
REP

Loop

BANK 2

PLAYBACK LOOP
vS Lp vS Tp vS Lsm

TACET if soloist choise
save loop for use on page 3, 5 and 8

before next page
SUSTAINER and
SOLOIST ONLY

before next page
SUSTAINER and
SOLOIST ONLY

5
ens. TACET

Solo alt 1

D.M.:5
1/2 Cmc

impro: gradually less span of pitch into microtonal bends or microtonal pitch change

before next page
DELAY ONLY
(optional soloist)

REP

Solo alt 2

D.M.:5
Cmc
lento
1,2,3...

optional:
impro. by variate ad lib or playing melody (cont. w 1/2)

1/2

GRAD. TO

S.tech./Vis.

SOLO: RING BUFFER

Techn.

E.1: HARMONIZER ON TRPT 2 AND TBN: SPLIT INTO MULTI.THIRDS

E.1&2: HARMONIZER FADE

BRASS INTO DELAY

before next page
DELAY ONLY
(optional soloist)

E.3: LOOP FROMN TUBA: CONCAT SYNTH/INTO DELAY - TUNE

E.3: PLAYBACK/TRANPOSE LOOP AD LIB

TUBA.: CUT INPUT DELAY

pp

Trpt 2

①

(♩ = c. 60)

D.M.:2 ----- 5

1/2 Wah

mf

rep. until cue

②

Senza misura (individual gliss)

ad lib. gliss, lento

T.O

Hm

p

GRAD. TO

③

④

⑤

ens. TACET

(TACET)

ppp

Hn

D.M.:5

Cmc 1/2

ppp

rep. until cue

ad lib. gliss, lento

p

GRAD. TO

(poco bend)

ppp

(TACET)

Tbn.

D.M.:2 ----- 5

Wah

mf

rep. until cue

T.O

ad lib. gliss, lento

Hm

p

GRAD. TO

(poco gliss.)

ppp

(TACET)

Tu

D.M.:5

Cmc 1/2

ppp

rep. until cue

ad lib. gliss, lento

p

GRAD. TO

(poco bend)

ppp

(TACET)

Loop

6/4

vS Lp vS Tp vS Lsm

(playback loop)

(volum ped)

STOP LOOP

optional octaves

D.M.:20 *secco*

Pm

Solo alt 1

ff

secco

D.M.:AW

Pm

Solo alt 2

fff

SOLO: SUSTAINER

S.tech./Vis.

SOLOIST: SUSTAINER (control output etc.)

Sep: 2 sec.

GRAD. TO

Sep: 0 sec.

E1: GRAN. (HEAVY RHYTHM) ON BRASS

E1:GRAN. ON TUBA ONLY

E2: DELAY INPUT (ADD DISTR.)

E2: DELAY ON TRP/HN/TBN (ADD GRADUALLY)

E2: CUT INPUT

NO GRANULATION

DELATED ACTION TRPT INTO DELAY (SPEAKERS BEHIND ONLY)

before next page DELAY ONLY

①

②

③

④

⑤

Trpt 2

Pm

Lscr

mp

No sync. (Lscr)

GRAD. TO

ppp

D.M.:10

D.M.:AW 1,2,3.

fff

(TACET)

ad lib. ind. rhythms

ff secco

REP

Pm off (TACET)

Hn

Pm

Lscr

mp

No sync. (Lscr)

GRAD. TO

ppp

D.M.:10

D.M.:AW 1,2,3.

fff

(TACET)

ad lib. ind. rhythms

ff secco

REP

Pm off (TACET)

Tbn.

Pm

Lscr

mp

No sync. (Lscr)

GRAD. TO

ppp

D.M.:10

D.M.:AW

Pm off

D.M.:5 MP.....hiH

(TACET)

f(mp)

(TACET)

Tu

Lscr

mp

GRAD. TO

Kss

GRAD. TO

fff

D.M.:AW

D.M.:5 MP.....hiH

(TACET)

f(mp)

(TACET)

Loop

before next page
ELCTRO. and
SOLOIST ONLY

Solo alt 1

D.M:2

Sosu
1,2,3...

pppp

variate ad lib.

REP

Solo alt 2

D.M:5

one long note
small notes: alt. pitches w. rep.

pp

LflzA

ord.
(continuing pitch from start of 2)

GRAD. TO

GRAD. TO

GRAD. TO

Irr

D.M:0

vS

Lp

vS

Tp

vS

Lsm

f(imp)

REP

S.tech./Vis.

SOLO: RING BUFFER

SOLO ALT 2: GRAD. DISTURBED, FREQ. SHIFTER

Techn.

SAMPLE HN

Loop 1 Hn.

PLAYBACK HN.

MORPH

SOLOIST ALT 2: CONCAT SYNTHESIS

DELAYED ACTION
REPEAT
MORPH
(Hn.-Loop)

①

②

③

④

⑤

ens. TACET

D.M:1
Trpt 2

D.M:1

Fp

LWppl

Hp DM:3

TUTTI BRASS:
D.M:3

Prm

(TACET)

vS

REP

(TACET)

D.M:3
Hn

D.M:3

LTflzA

(put on mute)

Prm

(TACET)

D.M:1

Fp

Hp

REP

(TACET)

D.M:1
Tbn.

D.M:1

bLA

(TACET)

D.M:1

Lp

Tp

Msm

REP

(TACET)

D.M:1
Tu

D.M:3

LWppl

Tp

Lp

Hp

(put on mute)

Prm

(TACET)

Prm off

Loop

BANK 2

PLAYBACK LOOP

vS

Lp

vS

Tp

STOP
LOOP

(volum ped)

(no sync. w. playing instr.)

1,2,3... Cmc (tight closed)
long notes (fermatas) may be done short in repetitions

before next page
SUST. ONLY

Solo alt 1

D.M:10

p

Solo alt 2

p

S.tech./Vis.

SOLO: RING BUFFER

Techn.

D.D: fb20
GRAN: high sep./slowly
EACH CHORD

GRAD. TO

DELAY GRANULATE (CONTINUE)

GRAD. TO

(TUNE GRAD. UP)

D.D: fb90
GRAN: low sep./fast/pitched
ORG. PITCHED TBN. SAMPL.

BRASS CHORD INTO SUST.

before next page
SUST. ONLY

①

②

③

④

⑤

⑥

D.M:5
Trpt 2

Hm

ppp

LTflzH (TACET)

Hm off

D.M:5
Hn

Hm

ppp

LTflzH (TACET)

Hm off

D.M:5
Tbn.

Hm

ppp

LTflzH (TACET)

Hm off

D.M:2
Tu

loop

blA

sho

Lp

REP

GRAD. TO

blA

Msm (put on mute)

fa

D.M:5
Prm

LTflzH (TACET)

Prm off

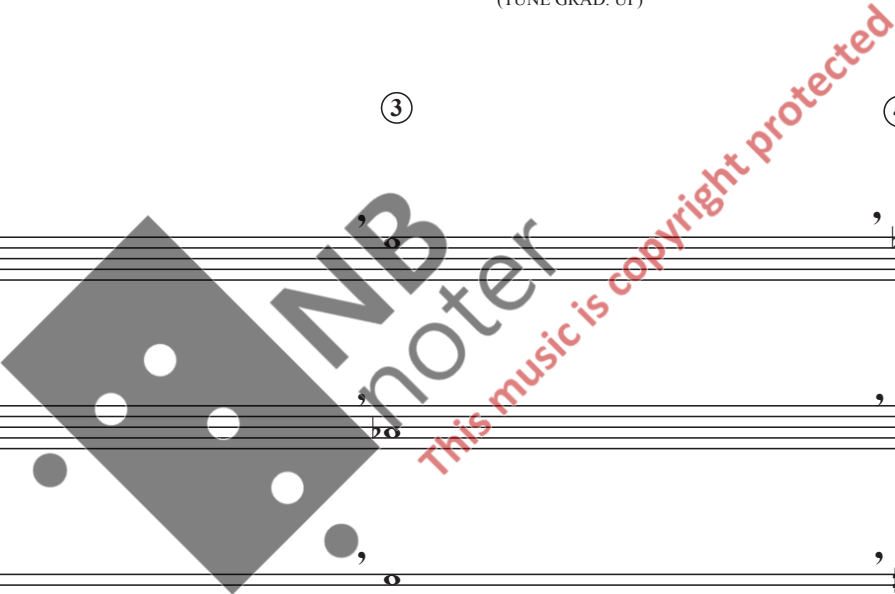
BANK 3

PLAYBACK LOOP

blA

Lp

STOP LOOP



[illegible]

Cmc, combine alt 1&2 ad lib.
1,2,3...
Rapidly

Solo alt 1

f

GRAD. TO

Irr (not rapidly)

(TACET)

before next page
ELECTR. ONLY

lento
1,2,3...
pp

Solo alt 2

GRAD. TO

SOLO: DELAY AD LIB

S.tech./Vis.

REALTIME SAMPLING, PLAYBACK TRANSPOSED
ONE BY ONE INSTR, KEEP ALL UNTIL FADE
(TROMBONE, HORN, TRUMPET 2)

Techn.

(OPTIONAL)

FADE

all instr: 1 semi-tone up
Tbn

pp

Hn

Trpt 2

KEEP ALL

SAMPLING OF NEW CHORD

FADE

all instr: 1 semi-tone up
Tbn

Hn

Trpt 2

KEEP ALL

before next page
ELECTR. ONLY

①

②

③

④

⑤
TACET

D.M:10
Trpt 2

Cmc

pp

FADE

D.M:10
Hn

Cmc

pp

FADE

D.M:10
Tbn.

Cmc

pp

FADE

Tu

D.M:3
LTflzA

f(mp)

Gliss

f(mp)

(TACET)

PLAYBACK LOOP
use loop from page 2

BANK 2

vS

Lp

vS

Tp

vS

Lsm

Euph.

mp

STOP
LOOP

0

OPTIONAL: Wah (+=closed, o=open) 1/2
OR: Cm 1/2 w.out +/- (combining Alt 1 & 2 is possible if Cm)

Solo alt 1

Solo alt 2

S.tech./Vis.

Techn.

D.M:10

Trpt 2

Hn

Tbn.

D.M:10

Tu

Loop

lento + o + o + o + o + o + o + o + o + o

pp

GRAD. TO

f

3,2,1...

1,2,3... Cmc (tight closed)

p

SOLO: RING BUFFER

AUTO-TUNE (pre-programmed pitches triggered by Tbn-gliss)

Tbn/Hn

pp

① ② ③ ④ ⑤ ⑥ ⑦

trigged from Tuba

Cmc

variate rest

variate by changing tone into Lp and Tp, if so: D.M: 0

REP

p secco

Sord. D.M:5 1/2

pp

Cmc D.M:5

pp

trigged from Eb Cnt

variate by changing tone into Lp and Tp, if so: D.M: 0

REP

p secco

continue page 10

before next page SOLOIST ONLY

before next page SOLOIST ONLY

TACET

ens. TACET

(TACET)

(TACET)

(TACET)

(TACET)

Solo alt 1
 Solo alt 2
 S.tech./Vis.
 Techn.
 Trpt 2
 Hn
 Tbn.
 Tu
 Loop