

Ben Jameson

# Construction in Metal

for electric guitar and *Guitar Hero* controller



## **Construction in Metal-Performance Notes**

### **Guitar Hero controller-technical setup and notation**

In *Construction in Metal* the *Guitar Hero* Xbox 360 controller is used to trigger and manipulate samples from well-known rock recordings. The controller's USB dongle allows it to be connected to a computer, through which this sample triggering can be programmed and controlled (advice on suitable software can be provided on request). The computer's audio output should be played through some form of amplifier, preferably one that has a similar appearance to a guitar amplifier.

There are five samples, one for each of the controller's 'fret' buttons (the audio files can be supplied on request). Each sample is triggered by holding down the appropriate fret button and clicking the 'strum bar' up or down (see below). Releasing the fret button before the end of the sample stops playback, and a button can also be held down while the sample is repeatedly triggered with the strum bar for a 'stuttering' effect. It takes some practice to get used to coordinating the left and right hands in order to trigger the samples reliably and accurately. The controller's whammy bar is also sometimes used to alter the playback speed and pitch of certain samples, and should be configured so that it lowers the pitch by a perfect fourth when fully depressed (the playback speed is thus reduced by approx. 25%).



The performer using the controller has their part notated on three staves:

- The upper stave indicates choreography (explained in the final section of these notes).
- The middle stave indicates button presses on the controller, using a kind of colour-coded tablature. Each line on the stave represents one of the fret buttons.
- The lower stave represents the content of the samples, in standard notation.

Below is a description of the five samples, with musical examples demonstrating how they appear in the score:

**Sample 1** (green button-closest to the headstock): A short extract of three power chords from the beginning of AC/DC's *Highway to Hell*. This sample is sometimes slowed down and lowered in pitch by depressing the whammy bar.

$\text{♩}=113$

A musical score consisting of three staves. The top staff is a blank five-line staff with a brace on the left labeled 'A' above the top line and 'B' below the bottom line. The middle staff is a treble clef staff with a key signature of one sharp. It features a green circle on the second line, followed by a vertical bar line, and then a series of eighth-note chords. The bottom staff is a bass clef staff with a key signature of one sharp. It shows a series of eighth-note chords.

**Sample 2** (red button): An extended version of the previous extract, featuring the three power chords and a drum beat. The length of this sample is often varied by releasing the fret button early, and it is also slowed down and lowered in pitch with the whammy bar.

$\text{♩}=113$

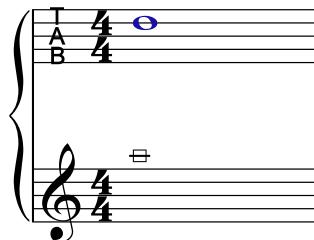
A musical score consisting of three staves. The top staff is a blank five-line staff with a brace on the left labeled 'A' above the top line and 'B' below the bottom line. The middle staff is a treble clef staff with a key signature of one sharp. It features a red circle on the second line, followed by a vertical bar line, and then a series of eighth-note chords. The bottom staff is a bass clef staff with a key signature of one sharp. It shows a series of eighth-note chords.

**Sample 3** (yellow button): A rhythmically complex single note line taken from Rush's *The Spirit of Radio*. Only the guitar is shown in the notation (it is doubled by bass and drums).

$\text{♩}=\text{c.}270$

A musical score consisting of two staves. The top staff is a treble clef staff with a key signature of one sharp. It features a continuous line of eighth-note single notes. The bottom staff is a bass clef staff with a key signature of one sharp. It shows a series of eighth-note chords.

**Sample 4** (blue button): A sample of feedback taken from Jimi Hendrix's *Foxy Lady*. The feedback pitch is notated as a rectangular note head. This sample is often manipulated using the whammy bar to create dips in pitch and glissandi.



**Sample 5** (orange button-closest to the guitar body): Two ascending powerchords taken from Black Sabbath's *War Pigs*. The bass and drums are not shown in the notation. This sample is often used with the 'stuttering' effect described above.

$\text{♩} = 176$

In the final section of the piece, cross note heads are used to indicate that the fret buttons should be pressed without using the strum bar, to create button clicking noises. These cross note heads are also used on a ledger line below the stave to represent strum bar clicks (without any fret buttons being held down).

For example:

#### Electric guitar-setup and notation

The electric guitarist should use a 'classic rock' style overdrive sound, similar to that in the AC/DC samples. Pedals may be used to obtain this timbre, but these should not be visible to the audience or manipulated during the performance (although the guitar's volume knob should be used to silence the instrument during extended passages of rests). A noise suppression unit may be useful to avoid extraneous noise during choreographic gestures.

The electric guitar part is notated on two staves:

- The choreography appears in the upper stave (see below).
- The musical elements of the part appear in the lower stave, using standard notation (following the normal conventions of guitar music, with text instructions clarifying any unusual or ambiguous symbols).

## Choreography

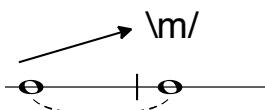
The choreographic movements are based on clichéd rock gestures and air guitar movements, and notated on a one-line stave that occasionally expands to two or three lines where multiple actions are performed simultaneously. Standard musical notation is used to indicate durations of actions, with various symbols above the stave representing the gestures to be performed. Rests indicate that the performer should adopt a neutral position, standing upright with the left hand on the guitar neck and the right hand resting on the guitar body as if ready to play. Generally speaking all actions should be performed mechanically (with each instance being as similar to the others as possible), and with a neutral facial expression, but there are moments where the performers are asked to become more fluid and expressive in their movements (and to adopt appropriate 'rock' facial expressions).

Below is a summary of the symbols used, and the gestures they represent (text is also used throughout the score to clarify the notation):

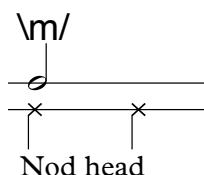
### **The 'devil horns' gesture:**



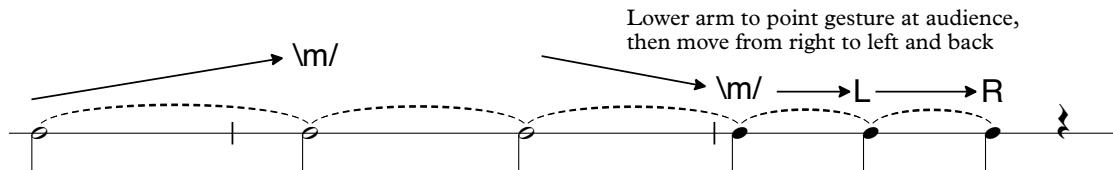
- The right hand index and little fingers are extended from a closed fist (the guitarist will need to find some way of incorporating the pick into this gesture) with the arm raised above the performer's head (and slightly to the right of vertical).
- The gesture should generally be maintained for the entirety of the notated duration, although there are some instances where it may be necessary to move the arm slightly earlier to prepare for the next action.
- Sometimes an arrow is used to indicate that the gesture should be raised slowly, with the raising of the arm lasting for the duration indicated below the arrow (the dotted tie indicates that two gestures are separate but linked to each other), e.g.:



- Where the arrow is not used, the gesture should be raised instantly.
- Sometimes the performer is required to nod their head while holding the \m/ gesture - this is shown with text and cross note heads in a second voice to indicate the rhythm, e.g.:



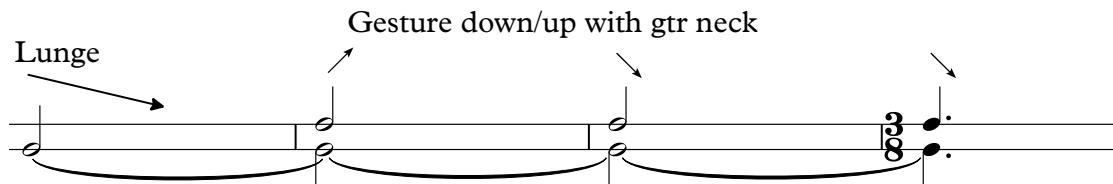
- Later in the piece, the performer using the controller is required to lower the 'devil horns' gesture to point it at the audience, and to move the arm across the body. This is indicated using arrows, text and the letters L and R to indicate movement to the left and right, e.g.:



### Lunging:

**Lunge**

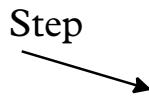
- The performer lunges forward and slightly to the left with the left leg.
- Often the performer is required to hold their lunged position and perform further gestures with the guitar neck (which should be performed by twisting the torso rather than simply moving the arms). These gestures are shown in a second higher voice, and indicated with arrows and clarifying text, e.g.:



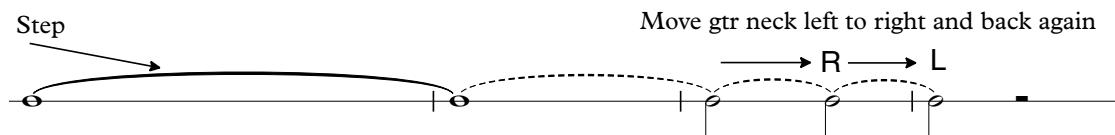
- The following arrows are used for these neck gestures:

- -Gesture downwards with neck
- -Gesture upwards with neck
- -Move neck to horizontal position
- ↑ -Swivel torso to face neck backwards (away from audience)
- ↓ -Swivel torso to face neck forwards (towards audience)

### **Stepping:**



- A slightly less dramatic version of the 'lunge'-the performer should simply step forward slightly with the left leg.
- This movement sometimes leads to a further gesture in which the guitarist is required to swing the guitar neck in front of their body to the right and left. This is indicated with arrows and the letters L and R to represent left and right, e.g.:



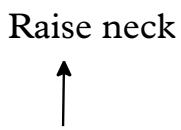
### **The 'windmill':**



- The performer holds the instrument out from the body slightly to the left, and performs an exaggerated circular 'upstroke' strumming motion.
- This symbol always comes in twos, and is followed by a second symbol, which indicates performing an exaggerated 'downstroke' motion, ending with the performer in a low crouched position:



### **Neck raises:**

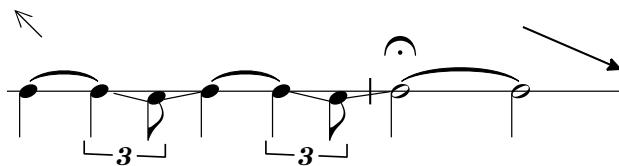


- The performer simply raises the neck of the guitar slightly.

### Guitar raise across body:



- The guitar neck is lifted across the body to be roughly parallel to the performer's right shoulder.
- A second downward arrow indicates that the instrument should be returned to a playing position.
- In some cases, the performer is required to lower and raise the guitar neck slightly, in synchronisation with changes in the pitch of the current sample. This is indicated with glissando lines in the notation, demonstrating the required rhythm of these movements, e.g.:



### Mimed strumming:



- Conventional 'downstroke' and 'upstroke' symbols are used to indicate mimed strumming motions.

### Jumping:



- The performer should jump in the air, timing their landing to roughly coincide with the beginning of the indicated duration.
- In most cases the performer should also gesture downwards slightly with the guitar neck, although where the performer is required to jump several times in a row with no rests this is not necessary (instead the last of each series of jumps should be given emphasis with a neck gesture).

### Disposition of performers

The performers should stand side by side, facing the audience, and with the electric guitarist on the audience's right. The performers' amplifiers and other equipment should be arranged directly behind them.



# Construction in Metal

Ben Jameson 2014-15

$\text{♩} = 113$  Perform actions mechanically, with blank facial expression

Actions

GH controller

Samples

Electric Guitar

Match volume of samples throughout

11 Lunge

1. 2. Lunge

GH

E. Gtr.

21 Lunge

x3 Lunge

Lunge

Lunge

Gesture down with gtr. neck

2. Hold position

2. Lunge

x4 Lunge

Gesture down with gtr. neck

Hold position

E. Gtr.

\*Return to upright position in between lunges

**Movements more fluid/natural (with appropriate 'rock' facial expressions!)**

2

Free movement, in response to the musical material (with appropriate 'rock' facial expressions!)

## Lunge

\mathbf{m}/

## Lunge

## Lunge

Musical score for three staves:

- GH Staff:** 5/8 time. Includes dynamic markings "Lunge" with arrows, "m/" (mezzo-forte), and various rests and note heads.
- Bass Staff:** 3/4 time. Includes dynamic markings "Lunge" with arrows, "m/" (mezzo-forte), and various rests and note heads.
- Treble Staff:** 3/4 time. Includes dynamic markings "Lunge" with arrows, "m/" (mezzo-forte), and various rests and note heads.

A red brace groups the GH and Bass staves.

Freeze in position

The image shows a musical score for electric guitar (E. Gtr.). The score consists of two staves. The top staff uses a treble clef and has a key signature of one sharp (F#). The bottom staff also uses a treble clef and has a key signature of one sharp (F#). The time signature starts at 5/8. A bracket above the first measure contains the instruction "Freeze in position". The second measure begins with a 4/4 time signature. The third measure features a bend technique, indicated by a wavy line under the notes and the label "(bend)" below the staff. The fourth measure continues with a 4/4 time signature. The fifth measure begins with a 3/4 time signature. The sixth measure contains a melodic line with a wavy line and the label "w/bar". The seventh measure begins with a 3/4 time signature. The eighth measure contains another melodic line with a wavy line and the label "w/bar". The ninth measure begins with a 3/4 time signature.

34 ♩=c.270

A

## **J=113 Mechanical character**

3

40 Lunge → \m/ Lunge → \m/ Lunge

GH (Guitar/Harmonica) part: Measures 1-3 show a melodic line in 3/8 time followed by a measure in 4/4 time. Measures 4-5 show a melodic line in 3/8 time followed by a measure in 4/4 time.

E. Gtr. (Electric Guitar) part: Measures 1-3 show a rhythmic pattern with a 'Pick scrape' and a 'gliss.' Measure 4 shows a complex arpeggiated pattern with fingerings (6, 3, 4, 2, 1) and a 'w/bar' wavy line.

47

GH

Gtr.

Bass

\m/ Lunge \m/ Lunge \m/ Lunge

Step Raise gtr. neck Lunge Raise neck Lunge

w/bar w/bar

53

Lunge

\f

\m/

Lunge

\f

\m/

Lunge

\f

\m/

Lunge

\f

GH

Gtr.

57

Lunge      Gesture down/up with gtr. neck      Lift neck across body      Return to playing position

GH {

E. Gtr. {

63

Lunge      Lunge      Lunge

GH {

E. Gtr. {

Step

Pinch low E and A strings together and gliss. down neck (pitches approximate)

\* Use node slightly behind 2nd fret (10th partial)

70

\m/      Lunge      \m/      Lunge      \m/

GH {

E. Gtr. {

Step

Raise neck      Lunge      Raise neck      Lunge

E. Gtr. {



Neck gestures

94 Lunge \m/ Lunge \m/ Lunge \m/ Lunge \m/ Lunge \m/ Lunge \m/ →

GH { A B

E. Gtr. {

Swivel neck backwards → ↑ → ↓ →

100 Swivel neck forwards

GH { A B

E. Gtr. {

Swivel neck forwards → ↓ → ↑ →

Swivel neck backwards

**Movements more fluid, with facial expressions**

106 Lunge \m/ Lunge \m/ Lunge \m/ Nod head

GH { A B

E. Gtr. {

Free movement, in response to the musical material

w/bar

**GH**

**E. Gtr.**

**Bass**

**110**

**Lunge**

**\m/**

**Lunge**

**\m/**

**Lunge**

**7**

**w/bar**

**w/bar**

113 =c. 270

**GH**

**E. Gtr.**

lunga

lunga

B

**J=c. 85 Perform actions slower to reflect tempo change  
(mechanical character)**

Lower arm to point gesture at audience,  
then move from right to left and back

119 Lunge

(Use whammy bar to lower pitch and tempo of sample)  
w/bar-----|

GH

Step

E. Gtr.

Pick scrape

w/bar

123 Lunge → \m/ → \m/ → L → R Lunge

w/bar-----| w/bar-----|

GH { A 3/8 B 3/8 | 4/4 | - - - - | 3/8 | 3/4 |

E. Gtr. { 3/8 | 4/4 | Step | 3/8 | 3/4 |

gliss. gliss. w/bar w/bar

128 =c. 270

GH { A 3/4 | 5/4 | 5/8 | 3/8 | 4/4 | 3/8 | 3/4 |

E. Gtr. { 3/4 | 5/4 | 5/8 | 3/8 | 4/4 | 3/8 | 3/4 |

134 =c. 85 Lunge → \m/ → \m/ → L → R Lunge

w/bar-----| w/bar-----|

GH { A 3/8 B 3/8 | 4/4 | - - - - | 3/8 | 3/4 |

E. Gtr. { 3/8 | 4/4 | Step | 3/8 | 3/4 |

w/bar w/bar Move gtr. neck left to right and back again R → L



**Lunge**

162

GH (Guitar/Harmonica) part:

- Measure 1: 3/8, note, 4/4 rest.
- Measure 2: 3/8, note, 4/4 rest. Dynamics: w/bar.
- Measure 3: 3/8, note, 4/4 rest. Dynamics: w/bar.
- Measure 4: 3/8, note, 4/4 rest. Dynamics: w/bar.
- Measure 5: 3/8, note, 4/4 rest. Dynamics: w/bar.
- Measure 6: 3/8, note, 4/4 rest. Dynamics: w/bar.
- Measure 7: 3/8, note, 4/4 rest. Dynamics: w/bar.
- Measure 8: 3/8, note, 4/4 rest. Dynamics: w/bar.

E. Gtr. (Electric Guitar) part:

- Measure 1: 3/8, note, 4/4 rest. Dynamics: Step.
- Measure 2: 3/8, note, 4/4 rest. Dynamics: w/bar.
- Measure 3: 3/8, note, 4/4 rest. Dynamics: w/bar.
- Measure 4: 3/8, note, 4/4 rest. Dynamics: w/bar.
- Measure 5: 3/8, note, 4/4 rest. Dynamics: w/bar.
- Measure 6: 3/8, note, 4/4 rest. Dynamics: w/bar.
- Measure 7: 3/8, note, 4/4 rest. Dynamics: w/bar.
- Measure 8: 3/8, note, 4/4 rest. Dynamics: w/bar.

169

w/bar-  
GH  
Step  
E. Gtr.  
w/bar

11

175

Lunge

$\text{m}/$

$\text{m}/ \rightarrow \text{L} \rightarrow \text{R}$

w/bar

GH

Step

R  $\rightarrow$  L

E. Gtr.

w/bar

183 Lunge \m/ Lunge \m/ Lunge

w/bar-----+ w/bar-----+ w/bar-----+

GH { A B 3 4 7 8 5 8

Raise neck Lunge Raise neck Lunge Lunge

E. Gtr. { 3 4 7 8 5 8

The musical score consists of four staves. The top staff is for the Alto Saxophone (A) and Bassoon (B). The second staff is for the Tenor Saxophone (T) and Bassoon (B). The third staff is for the Alto Saxophone (A) and Bassoon (B). The bottom staff is for the Bassoon (B). The score includes dynamic markings like 'Lunge' with arrows, 'Raise neck' with arrows, and 'w/bar' (with barline) over measures. Measure numbers 183, 3, 7, and 8 are indicated above the staves. Measure 183 starts with a single note for each instrument. Measures 3 and 7 begin with a bassoon note followed by a tenor saxophone note. Measure 8 begins with a bassoon note followed by a tenor saxophone note. Measure 183 ends with a bassoon note followed by a tenor saxophone note. Measure 3 ends with a bassoon note followed by a tenor saxophone note. Measure 7 ends with a bassoon note followed by a tenor saxophone note. Measure 8 ends with a bassoon note followed by a tenor saxophone note.

188

Lunge      Lunge

w/bar-----| w/bar-----| w/bar-----|

GH

E. Gtr.

gliss.

193

Lunge

w/bar----|

GH

A B

Raise neck

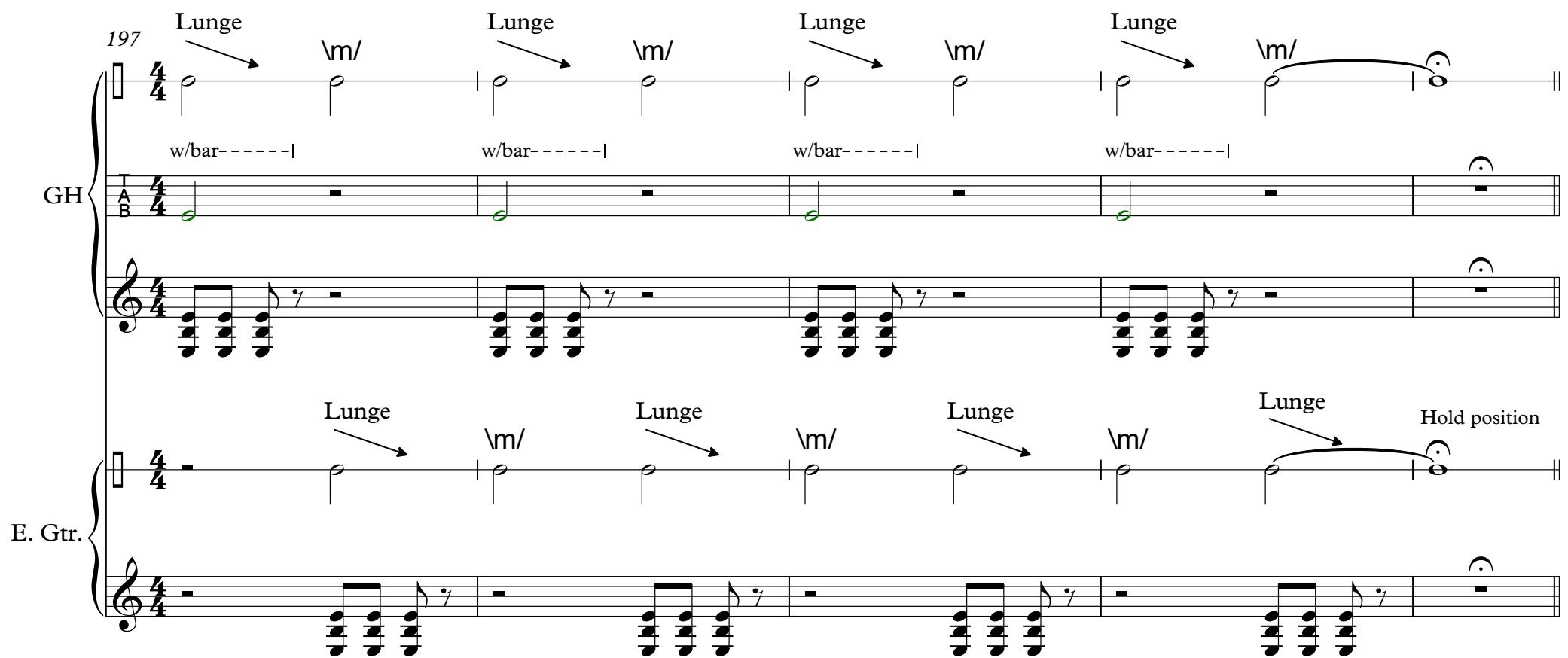
Lunge

E. Gtr.

Raise neck

Lunge

197



Lunge

w/bar----|

Lunge

w/bar----|

Lunge

w/bar----|

Lunge

w/bar----|

Lunge

w/bar----|

GH

A B

E. Gtr.

Lunge

Lunge

Lunge

Lunge

Hold position

Musical score for GH. The score consists of a single staff with a tempo marking of 202. It features a sequence of notes and rests, with dynamic markings like 'Lunge' and 'm/' above the staff. Time signatures change frequently, indicated by '3/4', '4/4', '8/8', and '2/4'. A label 'Mime strumming' is positioned below the staff.

E. Gtr {

Raise neck Lunge

Raise neck Lunge

Lunge \m/ Lunge

Lunge

Mime strumming

217 GH { Raise neck Lunge \m/ Lunge \m/ Lunge \m/ Lunge \m/ Lunge \m/ x2

E. Gtr { Lunge \m/ Lunge \m/ Lunge \m/ Lunge \m/ Lunge \m/ Lunge \m/ .5

accel.

Musical score for GH and E. Gtr. The score consists of two staves. The top staff is for GH, starting with a measure number 223, a key signature of 5 sharps, and a time signature of 8/8. The bottom staff is for E. Gtr., also with a key signature of 5 sharps and a time signature of 8/8. Both staves feature a melodic line with grace notes and dynamic markings like 'Lunge' and 'm/'.

**D**

$\text{=176}$  Jump in the air, landing on the beat  
and gesturing with guitar neck

232

GH

E. Gtr.

240

GH

E. Gtr.

Step

Perform music with 'rock' facial expressions and body language-some free choice choreography can be introduced in response to the musical gestures

248

GH

E. Gtr.

Step

256

GH { A B

E. Gtr.

Step Step Step

3

264

GH { A B

E. Gtr.

Step Step Step

(3)-3 3 3 3 3 3 3 3

270

GH { A B

E. Gtr.

molto rubato

274

GH { A B

E. Gtr.

(String bends)

Step

Step

GH { A B

E. Gtr.

288

Step

E. Gtr.

296

GH { A B

E. Gtr.

Step

Step

*tr*

5

302

GH { A B

E. Gtr.

Step

Step

5

5

5

307

Hold slightly crouched position

GH { A B

E. Gtr.

3

3

5

5

5

5

315

GH

Bass

E. Gtr.

E. Gtr.

Step

Step

Step

327

GH

E. Gtr.

Step

Step

Step

Hold position

333

GH

E. Gtr.

Hold position

336

GH

E. Gtr.

**E**

340  x8

Click strum bar without holding down any fret buttons (as loudly as possible)

GH A B

E. Gtr.

Perform actions mechanically ↗

Perform the moments when stepping forward with  
Step 'rock' facial expressions and body language.

Step

346  

Click buttons without using strum bar

GH A B

E. Gtr.

354  

Step

GH A B

E. Gtr.

360   

Step Step Step

GH A B

E. Gtr.

366

GH

E. Gtr.

Step

Step

Step

374

380

385

GH

E. Gtr.

Step

Step

Step

391

GH

E. Gtr.

395 Hold position

GH

E. Gtr. Hold position

