

林煒傑  
WEI-CHIEH LIN

錚——錚——錚—— | Zheng—Zheng—Zheng—

給預置二十一絃鋼絃箏與效果器  
for prepared 21-steel string Zheng and effect pedals  
(2023)

## 樂曲解說

《錚——錚——錚——》給預置二十一絃鋼絃箏與效果器，是延續 2018 年《錚縱》給預置二十一絃鋼絃箏獨奏曲，及2020 年《鉦錚》給預置二十一絃鋼絃箏與打擊的下一部曲。此曲是建構在箏與自己在對話，並利用效果器揭示出聲響中更細微的變化，並擴大出來。

此曲由郭靖沐與潘宜彤在2023年12月23號在臺灣臺大藝文中心首演。

Premiered by Jing-Mu Kuo and Debby Pan on December 23, 2023 at the Taiwan NTU Center for the Arts.

曲長約25分鐘。

Approximate duration: 25 minutes.

此曲由三個人委託創作，並受財團法人國家文化藝術基金會贊助。

Commissioned by 3people, and sponsored by The National Culture and Arts Foundation of Taiwan.

# 鋼弦箏定弦與預置 | Zheng scordatura and preparation

預置：6個大方形特殊迴紋針及19個小方形特殊迴紋針。  
preparation: 6 large special square paper clips and 19 small special square paper clips.

The image displays a musical score for the preparation of a Zheng instrument. It consists of three main parts: a notation staff, a frequency staff, and a diagram of the instrument's frame.

**記譜音高 (Notated Pitch):** The top staff shows a sequence of notes in a bass clef, followed by a treble clef. The notes are: G2, A2, B2, C3, D3, E3, F3, G3, A3, B3, C4, D4, E4, F4, G4, A4, B4, C5.

**實際定弦 (Actual Tuning):** The middle staff shows the actual frequencies for each note. The frequencies are: 55.0Hz, 56.61Hz, 58.27Hz, 99.7Hz, 102.6Hz, 138.6Hz, 142.6Hz, 146.8Hz, 201.7Hz, 207.6Hz, 213.7Hz, 311.1Hz, 320.2Hz, 329.6Hz, 339.3Hz, 466.16Hz, 479.82Hz, 739.99Hz, 761.67Hz, 783.99Hz, 806.96Hz.

**雁柱 (Bridge):** The bottom diagram shows a horizontal line representing the bridge. Vertical lines represent the strings. Paper clips are placed on the strings to indicate the preparation points. There are 6 large paper clips and 19 small paper clips in total.

**Audio chain:**

Zheng Metal Marshmallow Contact Mics White 1/4" TS to Mixer input 3  
 Zheng condenser microphones XLRs to Mixer inputs 1 and 2  
 Only Channels 3 send 100% to Aux  
 Mixer Aux Out  
 1/4" TS  
 Fairfield Circuitry Randy's Revenge  
 1/4" TS  
 Digitech Whammy V  
 1/4" TS  
 Chase Bliss Blooper  
 1/4" TS  
 Chase Bliss Gravitas  
 1/4" TS  
 Chase Bliss Mood MKII  
 1/4" TRS  
 Chase Bliss Generation Loss MKII  
 1/4" TRS to 2 TS breakout cable  
 Mixer 5+6 stereo in (ST1)  
 Mixer channels 1, 2, 5, 6 to main mix (50% mix)  
 Main XLR Stereo out to PA

**Midi chain:**

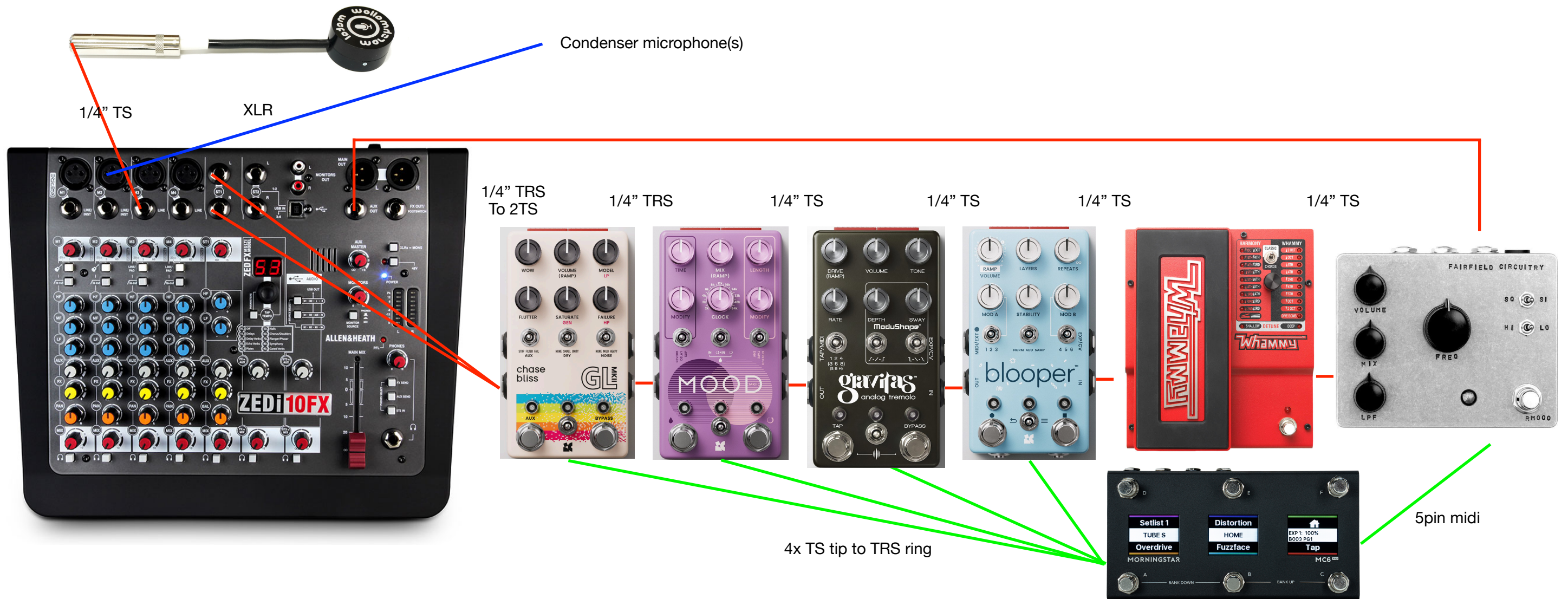
Morningstar MC6 Pro midi controller  
 Omniport 1: 1/4" TS tip to TRS ring to Blooper midi in  
 Omniport 2: 1/4" TS tip to TRS ring to Gravitas midi in  
 Omniport 3: 1/4" TS tip to TRS ring to Mood MKII midi in  
 Omniport 4: 1/4" TS tip to TRS ring to Generation Loss midi in  
 Midi out: 5 pin midi to 5 pin Whammy midi in

**Total cables:**

4 1/4" TS patch cables  
 1 1/4" TRS patch cable  
 1 1/4" TRS to 2 TS cable  
 2 1/4" TS cable  
 4 1/4" TS tip to TRS ring cables  
 1 5pin midi to 5pin midi

**Power chain:**

Regular IEC power for Mixer  
 Regular IEC power for Strymon Zuma  
 Zuma power to 5 pedals and Morningstar MC6 Pro, all 9v center negative  
 Zuma power to Chase Bliss Gravitas, 18v center negative.



Pedals initial preset:

Randy's Revenge:

Effect **ON** always (light on near the stomp switch)

Settings: Volume 12, Mix 7, LPF 5,  
Freq 7, SI (sine), Lo (low).

Whammy:

Effect **OFF** (light off above the stomp switch).

Toe up position.

Toggle switch to Classic.

Knob should turn to Deep (red light).

Blooper:

Both effects **OFF**.

Modifiers A and B (below pedal) **OFF**.

No dip switches.

Settings: Volume 12, Layers 5, Repeats 5,  
Mod A 7, Stability 7, Mod B 7.  
Toggle switch 1, toggle switch Norm, toggle switch 4  
Toggle switch between stomp switches: middle position.

Gravitas:

Both effects **OFF**. Left light should blink regularly.

No dip switches.

Settings: Drive 5, Volume 5, Tone 5,  
Rate 12, Depth 5, Sway 12.  
Left toggle: middle position, middle toggle: middle position, right toggle: middle position.  
Toggle switch between stomp switches: middle position.

Mood MKII:

Both effects **OFF**. Right light should blink regularly.

Dip switches: trails on, MISO on, Spread on, Smooth Clock on.

Settings: Time 7, Mix 5, Length 7,  
Modify 7, Clock 5, Modify 7.  
Left toggle: left position, middle toggle: middle position, right toggle: right position.  
Toggle switch between stomp switches: middle position.

Generation Loss:

Both effects **OFF**.

Dip switches: Spread on.

Settings: Wow 7, Volume 12, Model 7,  
Flutter 7, Saturate 7, Failure 7.  
Aux: stop. Dry: None. Noises: No.  
Toggle switch between stomp switches: middle position.

MC6 Pro setting:

Expression Port 1-4: MIDI Out, Tip Active.

Switches: All sensitivity 3.

Remember Toggle States

Midi Channels:

2: Whammy

3: Blooper

4: Gravitas

6: Mood MKII

7: Gen Loss MKII

CC waveform engines

Engine 1: random, 48-61

Engine 2: random, 0-64

Engine 3: triangle, 0-127

Engine 4: random, 64-127

Engine 5: random, 0-127

Engine 6: sawtooth up, 0-64

Engine 7: sawtooth up, 64-127

Engine 8: sawtooth up, 0-127

CC sequencer engines

Engine 1: 16: 64 54 45 37 30 24 19 15 12 9 7 5 3 2 1 0

Engine 2: 16: 0 10 19 27 34 40 45 49 52 55 57 59 61 62 63 64

Engine 3: 16: 64 74 83 91 98 104 109 113 116 119 121 123 124 125 126 127

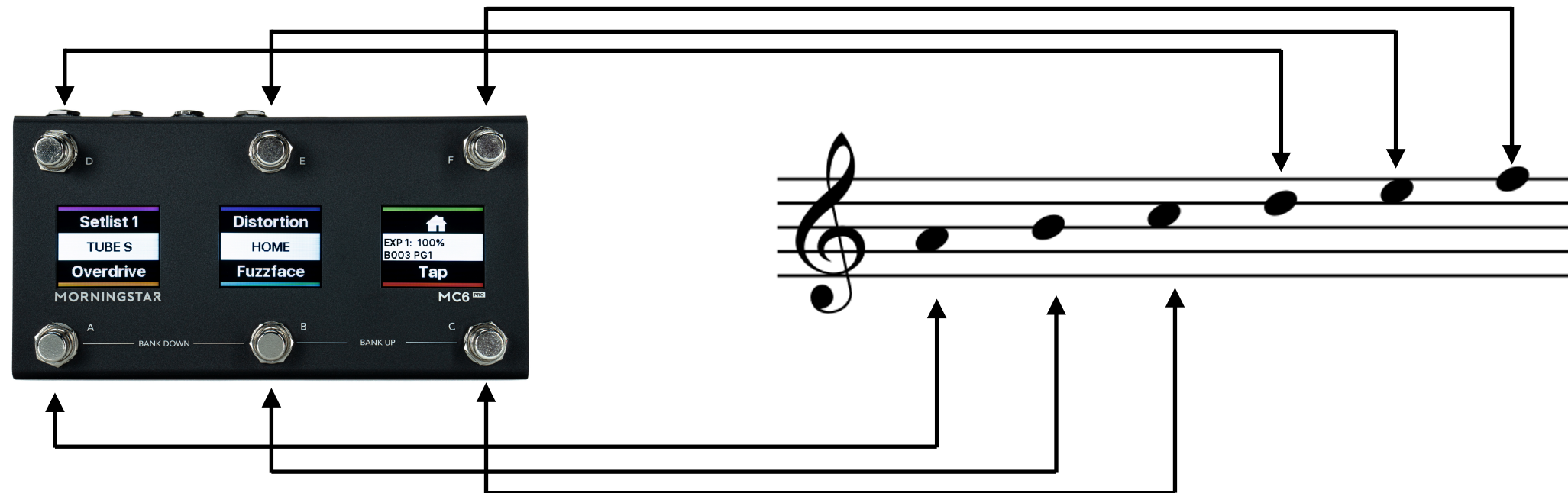
Engine 4: 16: 127 117 108 100 93 87 82 78 75 72 70 68 67 66 65 64

Engine 5: 16: 127 107 89 73 59 47 37 29 23 17 13 9 7 5 3 0

Engine 6: 16: 0 20 38 54 68 80 90 98 104 108 112 116 118 120 122 127

Engine 7: 15: 00000-10-20-30-40-50-64-50-40-30-20

Engine 8:



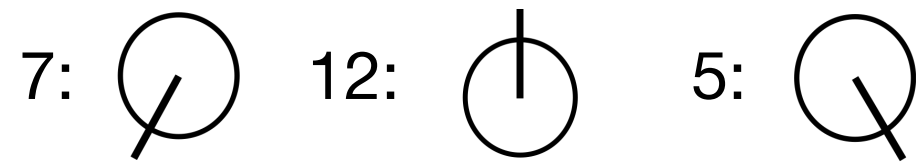
Morningstar Controller notation

A+B = Bank down, B+C = Bank up

D+E = Page down, E+F = Page up

**F: single press = next page, double press = previous page.**

Knob notation in general:



Randy's Revenge toggles:

SI = sine wave

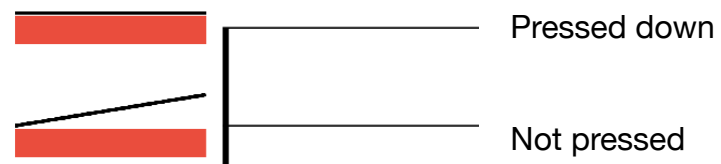
SQ = square wave

HI = high

LO = low

Whammy notation:

### Whammy



Mixer setting (Zedi-10FX)

Jack input to M3,

Gain 12

Line/Pad pressed

HF12, MF 12, LF 2

AUX 3

Mix to Master 10

Aux Master 12

Channel 5+6 (fx return) gain 12

Channel 5+6 (fx return) to Master 3



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①  $\approx 5''$   $\approx 5''$  (♩ = 58)

Zheng | 16 17 18 19 20 21

pp

①  $\approx 5''$   $\approx 5''$  (♩ = 58)

Whammy

MC6

SQ ←  
LO →

Randy

VOL

MIX

LPF

FREQ