

"UPSIDE-DOWN" SCALE STUDIES FOR IMPROVISATION

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This collection contains the exact same scales as Craig Fraedrich's *Scales for Improvisation*, but by using different patterns it treats the entire study much differently than you are accustomed to seeing.

The late, great, Dr. Donald S. Reinhardt ("Doc") used to recommend for brass players that they practice scales from top to bottom and back up again. This way you (1) play the higher notes twice as often as the lower notes, and (2) learn to play lower notes on a "higher" setting rather than trying to play higher notes on a "lower" setting. That is, many players develop their ranges more easily when they prepare to play high notes and use that embouchure setting to play low notes rather than the opposite.

We have all been taught our scales from the bottom up and most of us "visualize" our scales that way. Craig's resource is absolutely invaluable for that reason: all those scales are presented in a way that's easier for us to learn, memorize, and visualize.

But we can also practice scales in a manner designed to build embouchures, and that's precisely what this "Upside Down" Scale Studies for Improvisation collection is all about. Thanks, Craig, and thanks, Doc Reinhardt!

Tips for practicing this material

1. Use a metronome. Set it slow enough so that you don't miss any notes; over time, gradually speed it up.
2. Practice with a partner; this permits you to rest at least as much as you play. Practice two bars at a time; you play two bars and your partner plays those same two bars, then you play the next two bars and so on.

If you don't already have it, Craig Fraedrich's free PDF download *Scale Studies for Improvisation* is available at: <http://craigfraedrichmusic.com/Contents.htm>

For most students, seeing and playing all these scales from both viewpoints will help the student internalize them rightside-up and upside-down.

Interestingly, many players when learning their scales may play them flawlessly on the way up and then stumble on the way down. Therein lies another advantage of learning them upside-down. Getting right to the descending scale first will "cure" that tendency.













Incidentally, you are encouraged to play any or all of these studies up an octave. These are mostly presented in the lowest possible octave (for trumpet) so you have "room to grow" above that.

Also, since we are "Reinhardtizing" Craig's studies, here's a tip for maximizing the embouchure response factor, especially early in your playing day: start with breath attacks. When we get the tongue out of the way and let the air start the lip vibration, we enhance the response factor of our embouchure. After playing many using breath attacks, add the tongue as a "refining factor" and then alternate between breath attacks and some tongued attacks to keep the vibrating points supple.

About dynamics: make your starting note a mezzo forte to a forte (no more than that), and decrescendo when you descend so that your lowest notes are your softest notes (*p* or *pp*). Then crescendo from the low note back to your starting dynamic level. This develops aperture control which in turn helps you develop range.

Craig presents his studies with instructions for using swing articulations, and that's great. Since this is, after all, a Reinhardt-influenced version, we can also offer....

Donald S. Reinhardt's Twelve Standard Articulations:

1. 	8. 
2. 	9. 
3. 	(9) 
4. 	10. 
5. 	11. 
6. 	12. 
7. 	

Rich Willey

Perfecting short phrases narrows your focus and permits rapid progress. Team practicing gets you "honest," too.

3. Occasionally, memorize each two bar phrase before you move on (be able to play it with your eyes closed).

4. Record yourself practicing often, and listen to your recordings from time to time.

5. Treat scale practice as fun, not something boring.

Ionian Mode (Major Scale)

1

2

Ionian Mode (Major Scale)

3

4

Ionian Mode (Major Scale)

5

6

Dorian Mode

The image displays two exercises, labeled 1 and 2, for the Dorian mode. Each exercise consists of two lines of music, each line containing five staves. The music is written in 4/4 time and features a sequence of chords: Cm7, Fm7, Bbm7, Ebm7, Abm7, C#m7, F#m7, Bm7, Em7, Am7, Dm7, and Gm7. The notes are written in a way that suggests an 'upside-down' scale, starting from the 7th degree of the mode. Exercise 1 covers measures 1 through 24, and Exercise 2 covers measures 1 through 24. The chord names are handwritten in black ink above the corresponding staves.

Dorian Mode

3

4

Dorian Mode

5

1 2 3 4

5 6 7 8

9 10 11 12

13 14 15 16

17 18 19 20

21 22 23 24

6

1 2 3 4

5 6 7 8

9 10 11 12

13 14 15 16

17 18 19 20

21 22 23 24

Phrygian Mode

1

Chord progression for exercise 1:

- Measures 1-2: Cm7
- Measures 3-4: Fm7
- Measures 5-6: Bbm7
- Measures 7-8: Ebm7
- Measures 9-10: G#m7
- Measures 11-12: C#m7
- Measures 13-14: F#m7
- Measures 15-16: Bm7
- Measures 17-18: Em7
- Measures 19-20: Am7
- Measures 21-22: Dm7
- Measures 23-24: Gm7

2

Chord progression for exercise 2:

- Measures 1-2: Cm7
- Measures 3-4: Fm7
- Measures 5-6: Bbm7
- Measures 7-8: Ebm7
- Measures 9-10: G#m7
- Measures 11-12: C#m7
- Measures 13-14: F#m7
- Measures 15-16: Bm7
- Measures 17-18: Em7
- Measures 19-20: Am7
- Measures 21-22: Dm7
- Measures 23-24: Gm7

Phrygian Mode

3

Chord symbols for exercise 3:

- Measures 1-4: Cm7, Fm7
- Measures 5-8: Bbm7, Ebm7
- Measures 9-12: Abm7, Dbm7
- Measures 13-16: Gbm7, Bm7
- Measures 17-20: Em7, Am7
- Measures 21-24: Dm7, Gm7

4

Chord symbols for exercise 4:

- Measures 1-4: Cm7, Fm7
- Measures 5-8: Bbm7, Ebm7
- Measures 9-12: Abm7, Dbm7
- Measures 13-16: Gbm7, Bm7
- Measures 17-20: Em7, Am7
- Measures 21-24: Dm7, Gm7

Phrygian Mode

5

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

6

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Lydian Mode

1

2

Lydian Mode

3

C Δ **F Δ**

B $\flat\Delta$ **E $\flat\Delta$**

A $\flat\Delta$ **D $\flat\Delta$**

F $\sharp\Delta$ **B Δ**

E Δ **A Δ**

D Δ **G Δ**

4

C Δ **F Δ**

B $\flat\Delta$ **E $\flat\Delta$**

A $\flat\Delta$ **D $\flat\Delta$**

F $\sharp\Delta$ **B Δ**

E Δ **A Δ**

D Δ **G Δ**

Lydian Mode

5



1 2 3 4

5 6 7 8

9 10 11 12

13 14 15 16

17 18 19 20

21 22 23 24

6



1 2 3 4

5 6 7 8

9 10 11 12

13 14 15 16

17 18 19 20

21 22 23 24

Mixolydian Mode

1

Chord progression for exercise 1:
 1 C7, 2 C7, 3 F7, 4 F7, 5 Bb7, 6 Bb7, 7 Eb7, 8 Eb7, 9 Ab7, 10 Ab7, 11 Db7, 12 Db7, 13 F#7, 14 F#7, 15 B7, 16 B7, 17 E7, 18 E7, 19 A7, 20 A7, 21 D7, 22 D7, 23 G7, 24 G7.

2

Chord progression for exercise 2:
 1 C7, 2 C7, 3 F7, 4 F7, 5 Bb7, 6 Bb7, 7 Eb7, 8 Eb7, 9 Ab7, 10 Ab7, 11 Db7, 12 Db7, 13 F#7, 14 F#7, 15 B7, 16 B7, 17 E7, 18 E7, 19 A7, 20 A7, 21 D7, 22 D7, 23 G7, 24 G7.

Mixolydian Mode

The image displays two sets of musical exercises, labeled 3 and 4, for the Mixolydian mode. Each set consists of six staves of music, each with a corresponding chord written above it. The exercises are written in 4/4 time and use a key signature of two flats (Bb and Eb). Exercise 3 starts with a C7 chord and ends with a G7 chord. Exercise 4 starts with a C7 chord and ends with a G7 chord. The notes in the exercises are: C7 (C, Bb, Ab, G, F, Eb, D, C), Bb7 (Bb, Ab, Gb, F, Eb, D, C, Bb), Ab7 (Ab, Gb, Fb, Eb, D, C, Bb, Ab), Gb7 (Gb, Fb, Eb, D, C, Bb, Ab, Gb), E7 (E, D, C, B, A, G, F, E), A7 (A, G, F, E, D, C, B, A), D7 (D, C, B, A, G, F, E, D), F7 (F, Eb, D, C, B, Ab, G, F), Eb7 (Eb, D, C, B, Ab, G, F, Eb), Db7 (Db, C, B, Ab, G, F, Eb, Db), B7 (B, A, G, F, E, D, C, B), and G7 (G, F, E, D, C, B, Ab, G).

Mixolydian Mode

5

6

Aeolian Mode

The image displays two exercises, labeled 1 and 2, for the Aeolian mode. Each exercise consists of six staves of music, each with a handwritten chord progression above it. The music is written in 4/4 time and uses a treble clef. Exercise 1 starts with a C minor 7 chord (Cm7) and ends with a G minor 7 chord (Gm7). Exercise 2 starts with a C minor 7 chord (Cm7) and ends with a G minor 7 chord (Gm7). The chord progressions for both exercises are: Cm7, Bbm7, Abm7, F#m7, Em7, Dm7, Fm7, Ebm7, C#m7, Bm7, Am7, Gm7. The melodic lines are written in eighth and quarter notes, often with slurs and accents, and include various intervals and accidentals.

Aeolian Mode

3

4

Aeolian Mode

5

1 2 3 4

5 6 7 8

9 10 11 12

13 14 15 16

17 18 19 20

21 22 23 24

6

1 2 3 4

5 6 7 8

9 10 11 12

13 14 15 16

17 18 19 20

21 22 23 24

Locrian Mode

1

1 $C\phi$ 2 3 $F\phi$ 4

5 $Bb\phi$ 6 7 $D\#\phi$ 8

9 $G\#\phi$ 10 11 $C\#\phi$ 12

13 $F\#\phi$ 14 15 $B\phi$ 16

17 $E\phi$ 18 19 $A\phi$ 20

21 $D\phi$ 22 23 $G\phi$ 24

2

1 $C\phi$ 2 3 $F\phi$ 4

5 $Bb\phi$ 6 7 $D\#\phi$ 8

9 $G\#\phi$ 10 11 $C\#\phi$ 12

13 $F\#\phi$ 14 15 $B\phi$ 16

17 $E\phi$ 18 19 $A\phi$ 20

21 $D\phi$ 22 23 $G\phi$ 24

Locrian Mode

3

4

Chord progressions for exercise 3: C \emptyset , F \emptyset , Bb \emptyset , D $\sharp\emptyset$, G $\sharp\emptyset$, C $\sharp\emptyset$, F $\sharp\emptyset$, B \emptyset , E \emptyset , A \emptyset , D \emptyset , G \emptyset .

Chord progressions for exercise 4: C \emptyset , F \emptyset , Bb \emptyset , D $\sharp\emptyset$, G $\sharp\emptyset$, C $\sharp\emptyset$, F $\sharp\emptyset$, B \emptyset , E \emptyset , A \emptyset , D \emptyset , G \emptyset .

Locrian Mode

5

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

6

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Harmonic Minor

1

2

Harmonic Minor

3

1 $Cm\Delta7$ 2 $Fm\Delta7$ 3 4

5 $Bbm\Delta7$ 6 $Ebm\Delta7$ 7 8

9 $Abm\Delta7$ 10 $C\#m\Delta7$ 11 12

13 $F\#m\Delta7$ 14 $Bm\Delta7$ 15 16

17 $Em\Delta7$ 18 $Am\Delta7$ 19 20

21 $Dm\Delta7$ 22 $Gm\Delta7$ 23 24

4

1 $Cm\Delta7$ 2 $Fm\Delta7$ 3 4

5 $Bbm\Delta7$ 6 $Ebm\Delta7$ 7 8

9 $Abm\Delta7$ 10 $C\#m\Delta7$ 11 12

13 $F\#m\Delta7$ 14 $Bm\Delta7$ 15 16

17 $Em\Delta7$ 18 $Am\Delta7$ 19 20

21 $Dm\Delta7$ 22 $Gm\Delta7$ 23 24

Harmonic Minor

5

1 Cm Δ 7 Fm Δ 7
2 Bbm Δ 7 Ebm Δ 7
3 Abm Δ 7 C#m Δ 7
4 F#m Δ 7 Bm Δ 7
5 Em Δ 7 Am Δ 7
6 Dm Δ 7 Gm Δ 7

6

1 Cm Δ 7 Fm Δ 7
2 Bbm Δ 7 Ebm Δ 7
3 Abm Δ 7 C#m Δ 7
4 F#m Δ 7 Bm Δ 7
5 Em Δ 7 Am Δ 7
6 Dm Δ 7 Gm Δ 7

Detailed description: The image shows two musical exercises, labeled 5 and 6, for the Harmonic Minor scale. Each exercise consists of 24 measures, divided into two rows of 12 measures each. The exercises are written in 4/4 time and use a treble clef. The notes are written in a descending sequence, with accidentals indicating the specific notes of the harmonic minor scale. Above each measure, a chord symbol is provided, representing the triad formed by the notes in that measure. The chord symbols for exercise 5 are: Cm Δ 7, Fm Δ 7, Bbm Δ 7, Ebm Δ 7, Abm Δ 7, C#m Δ 7, F#m Δ 7, Bm Δ 7, Em Δ 7, Am Δ 7, Dm Δ 7, and Gm Δ 7. The same sequence of chord symbols is repeated for exercise 6. The notes in each measure are: 1: Bb, Ab, Gb; 2: Ab, Gb, Fb; 3: Gb, Fb, Eb; 4: Fb, Eb, D; 5: Eb, D, C; 6: D, C, B; 7: C, B, Ab; 8: B, Ab, Gb; 9: Ab, Gb, Fb; 10: Gb, Fb, Eb; 11: Fb, Eb, D; 12: Eb, D, C; 13: D, C, B; 14: C, B, Ab; 15: B, Ab, Gb; 16: Ab, Gb, Fb; 17: Gb, Fb, Eb; 18: Fb, Eb, D; 19: Eb, D, C; 20: D, C, B; 21: C, B, Ab; 22: B, Ab, Gb; 23: Ab, Gb, Fb; 24: Gb, Fb, Eb.

Fifth Mode of the Harmonic Minor

1

2

Fifth Mode of the Harmonic Minor

3

4

Fifth Mode of the Harmonic Minor

5

6

Ascending Melodic Minor

1

Exercise 1 consists of two systems of six staves each. The first system (measures 1-12) starts with a C minor 7 chord (Cm^{Δ7}) and moves through Bb minor 7 (Bbm^{Δ7}), Ab minor 7 (Abm^{Δ7}), F# minor 7 (F#m^{Δ7}), Em minor 7 (Em^{Δ7}), and Dm minor 7 (Dm^{Δ7}). The second system (measures 13-24) starts with an F minor 7 chord (Fm^{Δ7}) and moves through Eb minor 7 (Ebm^{Δ7}), Db minor 7 (Dbm^{Δ7}), Bm minor 7 (Bm^{Δ7}), Am minor 7 (Am^{Δ7}), Gm minor 7 (Gm^{Δ7}), and Fm minor 7 (Fm^{Δ7}). Each staff contains a melodic line with notes and accidentals, and a corresponding chord symbol above it. Measure numbers 1 through 24 are indicated at the end of each staff.

2

Exercise 2 follows the same structure as exercise 1, with two systems of six staves each. The first system (measures 1-12) starts with a C minor 7 chord (Cm^{Δ7}) and moves through Bb minor 7 (Bbm^{Δ7}), Ab minor 7 (Abm^{Δ7}), F# minor 7 (F#m^{Δ7}), Em minor 7 (Em^{Δ7}), and Dm minor 7 (Dm^{Δ7}). The second system (measures 13-24) starts with an F minor 7 chord (Fm^{Δ7}) and moves through Eb minor 7 (Ebm^{Δ7}), Db minor 7 (Dbm^{Δ7}), Bm minor 7 (Bm^{Δ7}), Am minor 7 (Am^{Δ7}), Gm minor 7 (Gm^{Δ7}), and Fm minor 7 (Fm^{Δ7}). Each staff contains a melodic line with notes and accidentals, and a corresponding chord symbol above it. Measure numbers 1 through 24 are indicated at the end of each staff.

Ascending Melodic Minor

3

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

4

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Dorian Flat 2

1

2

Dorian Flat 2

5

6

Lydian Augmented

1

2

Lydian Augmented

3 $C\Delta\#5$ $F\Delta\#5$

$Bb\Delta\#5$ $Eb\Delta\#5$

$Ab\Delta\#5$ $Db\Delta\#5$

$Gb\Delta\#5$ $Cb\Delta\#5$

$E\Delta\#5$ $A\Delta\#5$

$D\Delta\#5$ $G\Delta\#5$

4 $C\Delta\#5$ $F\Delta\#5$

$Bb\Delta\#5$ $Eb\Delta\#5$

$Ab\Delta\#5$ $Db\Delta\#5$

$Gb\Delta\#5$ $Cb\Delta\#5$

$E\Delta\#5$ $A\Delta\#5$

$D\Delta\#5$ $G\Delta\#5$

Lydian Augmented

5

1 $C\Delta\#5$ 2 3 $F\Delta\#5$ 4

5 $Bb\Delta\#5$ 6 7 $Eb\Delta\#5$ 8

9 $Ab\Delta\#5$ 10 11 $Db\Delta\#5$ 12

13 $Gb\Delta\#5$ 14 15 $Cb\Delta\#5$ 16

17 $E\Delta\#5$ 18 19 $A\Delta\#5$ 20

21 $D\Delta\#5$ 22 23 $G\Delta\#5$ 24

6

1 $C\Delta\#5$ 2 3 $F\Delta\#5$ 4

5 $Bb\Delta\#5$ 6 7 $Eb\Delta\#5$ 8

9 $Ab\Delta\#5$ 10 11 $Db\Delta\#5$ 12

13 $Gb\Delta\#5$ 14 15 $Cb\Delta\#5$ 16

17 $E\Delta\#5$ 18 19 $A\Delta\#5$ 20

21 $D\Delta\#5$ 22 23 $G\Delta\#5$ 24

Detailed description: The image shows two musical exercises, labeled 5 and 6, for the Lydian Augmented scale. Each exercise consists of 24 measures, divided into two rows of 12 measures each. The notes are written in treble clef with a 4/4 time signature. Above each measure is a chord symbol. Exercise 5 starts with a C Lydian Augmented scale (C, D, E, F#, G, A, B, C) and Exercise 6 starts with a Bb Lydian Augmented scale (Bb, C, D, Eb, F, G, Ab, Bb). The notes are played in a sequence of eighth notes, with some measures containing beamed eighth notes. The chord symbols are: 1. CΔ#5, 2. FΔ#5, 3. BbΔ#5, 4. EbΔ#5, 5. AbΔ#5, 6. DbΔ#5, 7. GbΔ#5, 8. CbΔ#5, 9. EΔ#5, 10. AΔ#5, 11. DΔ#5, 12. GΔ#5, 13. CΔ#5, 14. FΔ#5, 15. BbΔ#5, 16. EbΔ#5, 17. AbΔ#5, 18. DbΔ#5, 19. GbΔ#5, 20. CbΔ#5, 21. EΔ#5, 22. AΔ#5, 23. DΔ#5, 24. GΔ#5.

Lydian Dominant

1

2

Lydian Dominant

3

4

Lydian Dominant

5

6

Mixolydian Flat 6

1

2

Mixolydian Flat 6

3 C7b13 F7b13

Bb7b13 Eb7b13

Ab7b13 C#7b13

F#7b13 B7b13

E7b13 A7b13

D7b13 G7b13

4 C7b13 F7b13

Bb7b13 Eb7b13

Ab7b13 C#7b13

F#7b13 B7b13

E7b13 A7b13

D7b13 G7b13

Mixolydian Flat 6

5

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

6

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

The image displays two sets of musical exercises, labeled 5 and 6, for the Mixolydian Flat 6 scale. Each set consists of six staves of music, each with a corresponding chord symbol above it. The exercises are written in 4/4 time and cover measures 1 through 24. The chord symbols for exercise 5 are: C7b13, F7b13, Bb7b13, Eb7b13, Ab7b13, C#7b13, F#7b13, B7b13, E7b13, A7b13, D7b13, and G7b13. The chord symbols for exercise 6 are: C7b13, F7b13, Bb7b13, Eb7b13, Ab7b13, C#7b13, F#7b13, B7b13, E7b13, A7b13, D7b13, and G7b13. The notation includes treble clefs, a key signature of one flat (Bb), and a time signature of 4/4. The exercises are designed to be played in an 'upside-down' fashion, as indicated by the page header.

Locrian Sharp 2

1

C ϕ **F ϕ**

B $\flat\phi$ **D $\sharp\phi$**

G $\sharp\phi$ **C $\sharp\phi$**

F $\sharp\phi$ **B ϕ**

E ϕ **A ϕ**

D ϕ **G ϕ**

2

C ϕ **F ϕ**

B $\flat\phi$ **D $\sharp\phi$**

G $\sharp\phi$ **C $\sharp\phi$**

F $\sharp\phi$ **B ϕ**

E ϕ **A ϕ**

D ϕ **G ϕ**

Locrian Sharp 2

3

4

Locrian Sharp 2

5

C \emptyset F \emptyset

B \flat \emptyset D \sharp \emptyset

G \sharp \emptyset C \sharp \emptyset

F \sharp \emptyset B \emptyset

E \emptyset A \emptyset

D \emptyset G \emptyset

6

C \emptyset F \emptyset

B \flat \emptyset D \sharp \emptyset

G \sharp \emptyset C \sharp \emptyset

F \sharp \emptyset B \emptyset

E \emptyset A \emptyset

D \emptyset G \emptyset

Diminished Whole Tone/Super Locrian

3

C⁷ALT F⁷ALT

B^b7^{ALT} E^b7^{ALT}

A^b7^{ALT} D^b7^{ALT}

F[#]7^{ALT} B⁷ALT

E⁷ALT A⁷ALT

D⁷ALT G⁷ALT

4

C⁷ALT F⁷ALT

B^b7^{ALT} E^b7^{ALT}

A^b7^{ALT} D^b7^{ALT}

F[#]7^{ALT} B⁷ALT

E⁷ALT A⁷ALT

D⁷ALT G⁷ALT

Diminished Whole Tone/Super Locrian

5

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

6

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Whole/Half Diminished

Named after the step construction of the scale as played from bottom to the top

1

2

13

14

15

16

17

18

19

20

21

22

23

24

Named after the step construction of the scale as played from bottom to the top

Whole/Half Diminished

UPSIDE-DOWN SCALE STUDIES FOR IMPROVISATION

The image displays two sets of musical exercises, labeled 3 and 4, each consisting of six staves of music in 4/4 time. The exercises are written in treble clef and feature a sequence of chords: C⁷, F⁷, B^b7, E^b7, A^b7, D^b7, F[#]7, B⁷, E⁷, A⁷, D⁷, and G⁷. The notes are written in a way that demonstrates the step construction of the scale from bottom to top. Measure numbers are provided at the beginning of each staff.

Whole/Half Diminished

Named after the step construction of the scale as played from bottom to the top

5

6

Exercise 5 consists of two rows of five staves each. The first row contains staves 1-5 with chord symbols C07, F07, Bb07, Eb07, Ab07, and Db07. The second row contains staves 6-10 with chord symbols F#07, B07, E07, A07, D07, and G07. Exercise 6 follows the same structure with identical chord symbols and note patterns.

Named after the step construction of the scale as played from bottom to the top

Half/Whole Diminished

UPSIDE-DOWN SCALE STUDIES FOR IMPROVISATION

The image displays two systems of musical notation for the Half/Whole Diminished scale. Each system consists of six staves, with handwritten chord names and measure numbers. The first system is marked with a '1' in a box and the second with a '2' in a box. The notes are written in a treble clef with a 2/4 time signature. The scale is played in an upside-down fashion, starting from the bottom and moving to the top.

System 1:

- Staff 1: C^o7 (measures 1-2), F^o7 (measures 3-4)
- Staff 2: B^bo7 (measures 5-6), E^bo7 (measures 7-8)
- Staff 3: A^bo7 (measures 9-10), D^bo7 (measures 11-12)
- Staff 4: F[#]o7 (measures 13-14), B^o7 (measures 15-16)
- Staff 5: E^o7 (measures 17-18), A^o7 (measures 19-20)
- Staff 6: D^o7 (measures 21-22), G^o7 (measures 23-24)

System 2:

- Staff 1: C^o7 (measures 1-2), F^o7 (measures 3-4)
- Staff 2: B^bo7 (measures 5-6), E^bo7 (measures 7-8)
- Staff 3: A^bo7 (measures 9-10), D^bo7 (measures 11-12)
- Staff 4: F[#]o7 (measures 13-14), B^o7 (measures 15-16)
- Staff 5: E^o7 (measures 17-18), A^o7 (measures 19-20)
- Staff 6: D^o7 (measures 21-22), G^o7 (measures 23-24)

Half/Whole Diminished

Named after the step construction of the scale as played from bottom to the top

3 C⁰⁷ F⁰⁷

B^{b07} E^{b07}

A^{b07} D^{b07}

F^{#07} B⁰⁷

E⁰⁷ A⁰⁷

D⁰⁷ G⁰⁷

4 C⁰⁷ F⁰⁷

B^{b07} E^{b07}

A^{b07} D^{b07}

F^{#07} B⁰⁷

E⁰⁷ A⁰⁷

D⁰⁷ G⁰⁷

Named after the step construction of the scale as played from bottom to the top

Half/Whole Diminished

UPSIDE-DOWN SCALE STUDIES FOR IMPROVISATION

5

6

Whole Tone

1

2

Whole Tone

3

1 C7+ F7+
2 Bb7+ Eb7+
3 Ab7+ Db7+
4 F#7+ B7+
5 E7+ A7+
6 D7+ G7+
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

4

1 C7+ F7+
2 Bb7+ Eb7+
3 Ab7+ Db7+
4 F#7+ B7+
5 E7+ A7+
6 D7+ G7+
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

Whole Tone

5 **C7+** **F7+**

Bb7+ **Eb7+**

Ab7+ **Db7+**

F#7+ **B7+**

E7+ **A7+**

D7+ **G7+**

6 **C7+** **F7+**

Bb7+ **Eb7+**

Ab7+ **Db7+**

F#7+ **B7+**

E7+ **A7+**

D7+ **G7+**

Major Pentatonic

The image displays two exercises, labeled 1 and 2, for the Major Pentatonic scale. Each exercise consists of 24 measures, organized into six systems of four measures each. The notes are written in a treble clef with a 4/4 time signature. Exercise 1 starts with a C major pentatonic scale (C, D, E, F, G) and proceeds through the following keys: Bb, Ab, F#, E, D, and G. Exercise 2 starts with a C major pentatonic scale and proceeds through the following keys: Bb, Ab, F#, E, D, and G. The notes are written in a treble clef with a 4/4 time signature. Exercise 1 starts with a C major pentatonic scale (C, D, E, F, G) and proceeds through the following keys: Bb, Ab, F#, E, D, and G. Exercise 2 starts with a C major pentatonic scale and proceeds through the following keys: Bb, Ab, F#, E, D, and G.

Major Pentatonic

3

4

Major Pentatonic

5

6

Detailed description of the musical score: The page contains two exercises, 5 and 6, each consisting of 12 major pentatonic scales. Exercise 5 starts with a box containing the number '5'. The scales are: 1. C major (C4-D4-E4-F4-G4-A4), 2. F major (F4-G4-A4-Bb4-C5), 3. Bb major (Bb3-C4-D4-Eb4-F4), 4. Eb major (Eb3-F3-G3-Ab3-Bb3), 5. Ab major (Ab2-Bb2-C3-Db3-Eb3), 6. Db major (Db2-Eb2-F2-Gb2-Ab2), 7. F# major (F#3-G#3-A#3-B4-C#4), 8. B major (B3-C#4-D#4-E5-F#5), 9. E major (E3-F#3-G#3-A4-B4), 10. A major (A3-B3-C#4-D4-E4), 11. D major (D3-E3-F#3-G3-A3), 12. G major (G2-A2-B2-C3-D3). Exercise 6 starts with a box containing the number '6'. The scales are: 1. C major (C4-D4-E4-F4-G4-A4), 2. F major (F4-G4-A4-Bb4-C5), 3. Bb major (Bb3-C4-D4-Eb4-F4), 4. Eb major (Eb3-F3-G3-Ab3-Bb3), 5. Ab major (Ab2-Bb2-C3-Db3-Eb3), 6. Db major (Db2-Eb2-F2-Gb2-Ab2), 7. F# major (F#3-G#3-A#3-B4-C#4), 8. B major (B3-C#4-D#4-E5-F#5), 9. E major (E3-F#3-G#3-A4-B4), 10. A major (A3-B3-C#4-D4-E4), 11. D major (D3-E3-F#3-G3-A3), 12. G major (G2-A2-B2-C3-D3). Each scale is written on a single staff in 4/4 time, with measure numbers 1 through 24 indicated below the notes.

The "Blues" Scale

1

2

The "Blues" Scale

The image displays two musical exercises, labeled 3 and 4, for the Blues Scale. Each exercise consists of five staves of music, with chord changes indicated above the notes. Exercise 3 starts with a C7 chord and ends with a G7 chord. Exercise 4 starts with a C7 chord and ends with a G7 chord. The notes are written in a treble clef with a 4/4 time signature. The scale is played in an 'upside-down' fashion, starting with the 7th degree of the scale.

Exercise 3:

- Staff 1: C7 (measures 1-4)
- Staff 2: Bb7 (measures 5-8)
- Staff 3: Ab7 (measures 9-12)
- Staff 4: F#7 (measures 13-16)
- Staff 5: E7 (measures 17-20), A7 (measures 19-20), D7 (measures 21-24)

Exercise 4:

- Staff 1: C7 (measures 1-4)
- Staff 2: Bb7 (measures 5-8)
- Staff 3: Ab7 (measures 9-12)
- Staff 4: F#7 (measures 13-16)
- Staff 5: E7 (measures 17-20), A7 (measures 19-20), D7 (measures 21-24)

The "Blues" Scale

5

Chord progressions for exercise 5: C7, F7, Bb7, Eb7, Ab7, Db7, F#7, B7, E7, A7, D7, G7.

6

Chord progressions for exercise 6: C7, F7, Bb7, Eb7, Ab7, Db7, F#7, B7, E7, A7, D7, G7.