

Major (Ionian)

Numeral	Mode	Different Notes	Chords	Function
I	Ionian	~	Δ (9,11,13)	Tonic
ii	Dorian	b3,b7	- (9,11,13)	Supertonic
iii	Phrygian	b2,b3,b6,b7	- (b9,11,b13)	Mediant
IV	Lydian	#4	Δ (9,#11,13)	Subdominant
V	Mixolydian	b7	7 (9,11,13)	Dominant
vi	Aeolian	b3,b6,b7	- (9,11,b13)	Submediant
vii	Locrian	b2,b3,b5,b6,b7	\emptyset / -7b5 (b9,11,b13)	Leading Tone

Natural Minor (Aeolian)

Numeral	Mode	Different Notes	Chords
i	Aeolian	b3,b6,b7	- (9,11,b13)
ii	Locrian	b2,b3,b5,b6,b7	\emptyset / -7b5 (b9,11,b13)
bIII	Ionian	~	Δ (9,11,13)
iv	Dorian	b3,b7	- (9,11,13)
v	Phrygian	b2,b3,b6,b7	- (b9,11,b13)
bVI	Lydian	#4	Δ (9,#11,13)
bVII	Mixolydian	b7	7 (9,11,13)

Harmonic Minor

Numeral	Mode	Different Notes	Chords
i	Aeolian $\natural 7$	b3,b6	$-\Delta (9,11,b13)$
ii	Locrian $\natural 6$	b2,b3,b5,b7	$\emptyset / -7b5 (b9,11,13)$
bIII+	Ionian Augmented	#5	$\Delta\#5 (9,11,13)$
iv	Dorian #4	b3,#4,b7	$-(9,\#11,13)$
V	Phrygian Dominant	b2,b6,b7	7 (b9,11,b13)
bVI	Lydian #9	#2	$\Delta (\#9,11,13)$
viio	Ultra Locrian bb7	b2,b3,b4,b5,b6,bb7	7o (b9,b11,b13)

Melodic Minor

Numeral	Different Notes	Chords
i	b3	$-\Delta (9,11,13)$
ii	b2,b3,b7	$-(b9,11,13)$
bIII+	#4,#5	$\Delta\#5 (9,\#11,13)$
IV	#4,b7	7 (9,#11,13)
V	b6,b7	7 (9,11,b13)
vi	b3,b5,b6,b7	$\emptyset / -7b5 (9,11,b13)$
vii	b2,b3,b4,b5,b6,b7	$\emptyset / -7b5 (b9,b11,b13)$

Minor (Dorian)

Numeral	Mode	Different Notes	Chords
i	Dorian	b3,b7	- (9,11,13)
ii	Phrygian	b2,b3,b6,b7	- (b9,11,b13)
bIII	Lydian	#4	Δ (9,#11,13)
IV	Mixolydian	b7	7 (9,11,13)
v	Aeolian	b3,b6,b7	- (9,11,b13)
vi	Locrian	b2,b3,b5,b6,b7	\emptyset / -7b5 (b9,11,b13)
bVII	Ionian	~	Δ (9,11,13)

Minor (Phrygian)

Numeral	Mode	Different Notes	Chords
i	Phrygian	b2,b3,b6,b7	- (b9,11,b13)
bII	Lydian	#4	Δ (9,#11,13)
bIII	Mixolydian	b7	7 (9,11,13)
iv	Aeolian	b3,b6,b7	- (9,11,b13)
v	Locrian	b2,b3,b5,b6,b7	\emptyset / -7b5 (b9,11,b13)
bVI	Ionian	~	Δ (9,11,13)
bvii	Dorian	b3,b7	- (9,11,13)

Major and Minor Scales

Name	Mode	Diff. Notes	Chords
Major	Ionian		Δ (9,11,13)
Natural Minor	Aeolian	b3,b6,b7	- (9,11,b13)
Harmonic Minor		b3,b6	$-\Delta$ (9,11,b13)
Melodic Minor		b3	$-\Delta$ (9,11,13)
Dorian	Dorian	b3,b7	- (9,11,13)
Phrygian	Phrygian	b2,b3,b6,b7	- (b9,11,b13)
?	?	b2,b3,b4,b6,b7	- (b9,b11,b13)
?	?	b2,b3,#4,b6,b7	- (b9,#11,b13)
?	?	b2,b3,#4,b7	- (b9,#11,13)
?	?	b3,#4,b6,b7	- (9,#11,b13)
?	?	b3,#4,b7	- (9,#11,13)

Chord Symbols

Example	Symbol	Name	Meaning
I / C Δ	Δ	Major (7th)	3rd and 7th are natural (not flat)
V / G7	7	(Dominant) 7th	3rd is natural but 7th is flat
ii / d-	-	minor (7th)	3rd and 7th are flat
vii / C \emptyset / -7b5	\emptyset / -7b5	half-diminished / minor-seven flat 5	3rd, 5th, and 7th are flat
vii / Co	o	diminished (7th)	3rd and 5th flat; 7th double-flat
i / c- Δ	- Δ	minor-Major (7th)	3rd is flat but 7th is natural
bIII+ / Eb Δ +	Δ + / Δ #5	Augmented Maj. (7th) / Major-seven sharp 5	3rd and 7th are natural, 5th is sharp
V+ / G7+	7+ / 7#5	Augmented (Dom.) 7th	3rd is natural, 7 is flat, 5th is sharp
e-7+	-7+ / -7#5	Augmented-minor (7th)	3rd and 7 are flat, 5th is sharp
e- Δ +	- Δ + / - Δ #5	Augmented-minor-Major (7th)	3rd is flat, 7 is natural, 5th is sharp

Note: Melodic minor *descends* down Natural minor in classical music

- Secondary dominant (precede any chord with its V chord as a dominant; equivalent of reharmonizing a chord to a V -> I progression)
- Reharmonize chord to a ii -> V -> I by preceding it with its ii and V chords
- Tritone Substitution
- Parallel-Minor substitution: Substitute a chord from the parallel (natural) minor key, e.g. i, ii \emptyset , bIII Δ , iv, v, bVI Δ , bVII
- Parallel-Minor substitution: Substitute a chord from the parallel (non-natural) minor keys, e.g. i- Δ , bIII Δ +, etc.