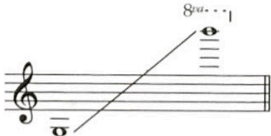
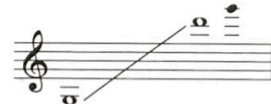






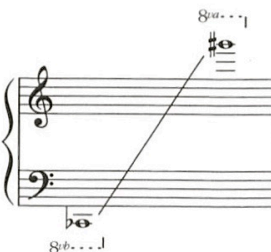


RANGES OF THE MOST FREQUENTLY USED ORCHESTRAL INSTRUMENTS

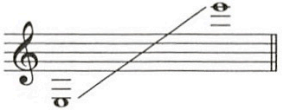
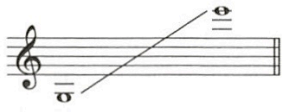

On many instruments the uppermost note of the range will vary from professional player to professional player. The ones given here are playable by all professionals and are those usually called for in orchestral playing.

<i>Instrument</i>	<i>Written Range (Professional)</i>	<i>Sounding Range</i>	<i>Written Range (Nonprofessional)*</i>	<i>Comments</i>
Strings				
Violin		as written		
Viola		as written		
Cello		as written		
Double bass		octave lower		
Harp (with pedals up)		as written		

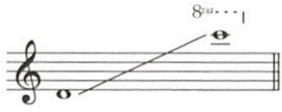
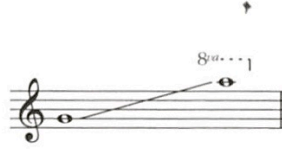
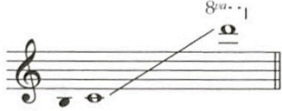
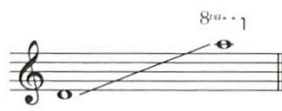
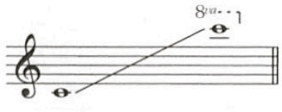
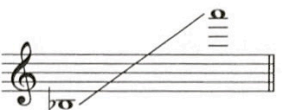
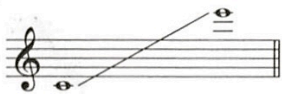
*Whole notes indicate the range for beginning orchestral players, black noteheads for those playing in amateur groups.

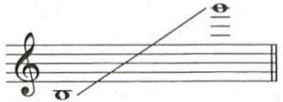

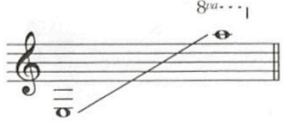
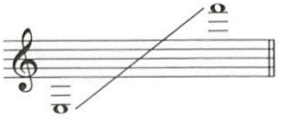

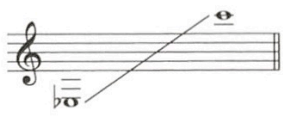
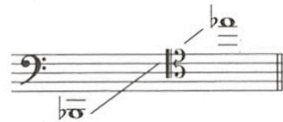



†In all the diagrams that indicate professional written ranges, black noteheads indicate notes not found on every instrument.








<i>Instrument</i>	<i>Written Range (Professional)</i>	<i>Sounding Range</i>	<i>Written Range (Nonprofessional)</i>	<i>Comments</i>
-------------------	---	-----------------------	--	-----------------

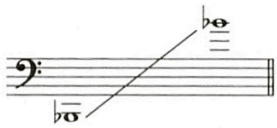
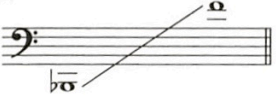
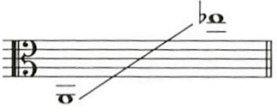

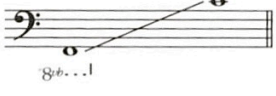

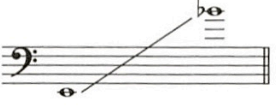
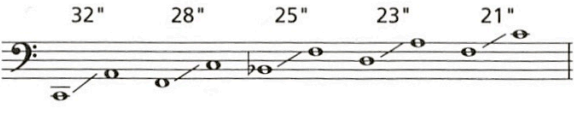
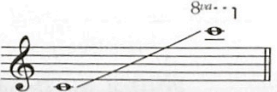
Guitar		octave lower		
Mandolin		as written		
Banjo		as written, but tenor banjo sounds octave lower		

Woodwinds

Piccolo		octave higher		
Flute		as written		
Alto flute		perfect 4th lower		Usually not available in nonprofessional groups
Oboe		as written		

<i>Instrument</i>	<i>Written Range (Professional)</i>	<i>Sounding Range</i>	<i>Written Range (Nonprofessional)</i>	<i>Comments</i>
English horn		perfect 5th lower		Very seldom available in nonprofessional orchestras
All clarinets except bass		B \flat : major 2nd lower A: minor 3rd lower D: major 2nd higher E \flat : minor 3rd higher E \flat alto: major 6th lower		Usually no D or E \flat clarinets are available in nonprofessional orchestras
Bass clarinet		major 9th lower; if written in bass clef, major 2nd lower		May not be available in nonprofessional groups
Bassoon		as written		Lowest and highest notes may not be playable by all nonprofessionals
Contrabassoon		octave lower		Usually not available in nonprofessional groups
All saxophones		B \flat soprano: major 2nd lower E \flat alto: major 6th lower B \flat tenor: major 9th lower		If available in nonprofessional groups, the saxophones should not be scored very low or high

Instrument	Written Range (Professional)	Sounding Range	Written Range (Nonprofessional)	Comments
Brass		E \flat baritone: octave plus a major 6th lower B \flat bass: 2 octaves plus a major 2nd lower		
Horn (plus pedal notes)		perfect 5th lower		
All trumpets except E \flat and D bass		C: as written B \flat : major 2nd lower D: major 2nd higher E \flat : minor 3rd higher B \flat Cornet: major 2nd lower C Bass: octave lower B \flat Bass: major 9th lower Flugelhorn: major 2nd lower		Usually only B \flat , C, or D trumpets are used in modern orchestras; all other trumpets, including the cornet and flugelhorn, are mostly used in bands
E \flat and D Bass trumpets		E \flat : major 6th lower D: minor 7th lower		
Tenor trombone		as written		

<i>Instrument</i>	<i>Written Range (Professional)</i>	<i>Sounding Range</i>	<i>Written Range (Nonprofessional)</i>	<i>Comments</i>
Bass Trombone		as written		
Alto Trombone		as written		Usually not available in nonprofessional orchestras
Tuba		as written		
Euphonium		as written; if notated in treble clef, major 9th lower		Usually not available in non-professional orchestras but always found in bands
Baritone		as written; if notated in treble clef, major 9th lower		
Percussion				
Timpani		as written		
Xylophone		octave higher		

<i>Instrument</i>	<i>Written Range (Professional)</i>	<i>Sounding Range</i>
-------------------	---	-----------------------

Marimba



The diagram shows a musical staff with a bass clef on the left and a treble clef on the right. A diagonal line starts from a note on the second space of the bass clef (G2) and extends to a note on the first space of the treble clef (G4). The upper note is labeled "8va...1".

as written

Vibraphone



The diagram shows a musical staff with a treble clef. A diagonal line starts from a note on the second space (G4) and extends to a note on the first space (G5). The upper note is marked with a double bar line.

as written

Glockenspiel



The diagram shows a musical staff with a treble clef. A diagonal line starts from a note on the second space (G4) and extends to a note on the first space (G6). The upper note is marked with a double bar line.

2 octaves higher

Chimes

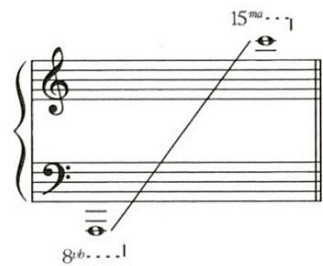


The diagram shows a musical staff with a treble clef. A diagonal line starts from a note on the second space (G4) and extends to a note on the first space (G5). The upper note is marked with a double bar line.

as written

Keyboard

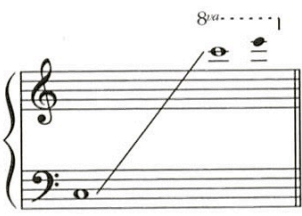
Piano





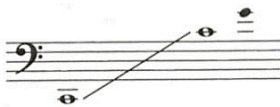
The diagram shows a grand staff with a treble clef on the right and a bass clef on the left. A diagonal line starts from a note on the second space of the bass clef (G2) and extends to a note on the first space of the treble clef (G5). The upper note is labeled "15^{ma}...1" and the lower note is labeled "8^{va}...1".

as written

<i>Instrument</i>	<i>Written Range (Professional)</i>	<i>Sounding Range</i>
-------------------	---	-----------------------

Celesta		octave higher
---------	---	---------------

Harpsichord		as written
-------------	---	------------

Organ	<p>Manuals</p>  <p>Pedal</p> 	as written
-------	--	------------

Harmonium		as written
-----------	---	------------

NAMES OF INSTRUMENTS IN FOUR LANGUAGES AND THEIR ENGLISH ABBREVIATIONS

<i>English</i>	<i>Italian</i>	<i>French</i>	<i>German</i>
Strings	Archi	Cordes	Streichinstrumente
Violin (Vln.)	Violino	Violon	Violine <i>or</i> Geige
Viola (Vla.)	Viola	Alto	Bratsche
Violoncello (Vlc.)	Violoncello	Violoncelle	Violoncell
Double bass (D.B.)	Contrabasso	Contrebasse	Kontrabass
Harp (Hp.)	Arpa	Harpe	Harfe
Woodwinds	Legni (or Fiati)	Bois	Holzbläser
Piccolo (Picc.)	Ottavino <i>or</i> Flauto piccolo	Petite flûte	Kleine Flöte <i>or</i> Pickelflöte
Flute (Fl.)	Flauto	Flûte	Flöte
Oboe (Ob.)	Oboe	Hautbois	Oboe <i>or</i> Hoboe
English horn (Eng. Hn.)	Corno inglese	Cor anglais	Englisches Horn
Clarinet (Cl.)	Clarinetto	Clarinette	Klarinette
Bass clarinet (Bs. Cl.)	Clarone <i>or</i> Clarinetto basso	Clarinette basse	Bassklarinette
Bassoon (Bsn.)	Fagotto	Basson	Fagott
Contrabassoon (Cbsn.)	Contrafagotto	Contrebasson	Kontrafagott
Saxophone (Sax.)	Sassofono	Saxophone	Saxophon
Brass(es)	Ottoni	Cuivres	Blechinstrumente
Horn (Hn.)	Corno	Cor	Horn
Trumpet (Tpt.)	Tromba	Trompette	Trompete
Trombone (Trb.)	Trombone	Trombone	Posaune
Tuba (Tba.)	Tuba	Tuba	Tuba
Percussion	Percussione	Batterie	Schlagzeug
Piano (Pno.)	Pianoforte	Piano	Klavier
Celesta (Cel.)	Celesta <i>or</i> Celeste	Céleste	Celesta
Harpsichord (Hpschd.)	Cemballo	Clavecin	Cembalo
Organ (Org.)	Organo	Orgue	Orgel
Harmonium (Harm.)	Organetto	Harmonium	Harmonium

<i>English</i>	<i>Italian</i>	<i>French</i>	<i>German</i>
Instruments of Definite Pitch			
Idiophones			
Xylophone (Xyl.)	Xilofono <i>or</i> Silofono	Xylophone <i>or</i> Claquebois	Xylophon <i>or</i> Holzharmonika
Marimba (Mar.)	Marimba	Marimba	Marimbaphon
Vibraphone (Vib.)	Vibrafono	Vibraphone	Vibraphon
Glockenspiel <i>or</i> Orchestral bells (Glsp.)	Campanelli <i>or</i> Campanette	Jeu de timbres <i>or</i> Carillon	Glockenspiel <i>or</i> Stahlspiel
Tubular Chimes (Chm.)	Campane <i>or</i> Capane tubolari	Jeu des cloches	Röhrenglocken <i>or</i> Glocken
Crotales (Crot.)	Crotali	Crotales <i>or</i> Cymbales antiques	Zimbeln
Musical saw (Saw) Flexatone (Flex.)	Sega cantante Flessatono	Lame musicale Flexatone	Singende Säge Flexaton
Membranophones			
Timpani (Timp.) Roto Tom (R. Tom)	Timpani Roto-Tom-Tom	Timbales Roto-Tom	Pauken Tom-Tom-Spiel
Instruments of Indefinite Pitch			
Metal Idiophones			
Crash cymbals (Cymb.)	Piatti <i>or</i> Cinelli	Cymbales	Becken <i>or</i> Tellern
Suspended cymbal (Susp. Cymb.)	Piatto sospeso	Cymbale suspendue	Hängendes Becken
Sizzle cymbal (Sizzle Cymb.)	Piatto chiodat	Cymbale sur tiges	Nietenbecken
Finger cymbals (Fing. Cymb.)	Cimbalini	Cymbales digitales	Fingerzimbeln
Triangle (Trgl.)	Triangolo <i>or</i> Acciarino	Triangle	Triangel
Anvil (Anv.) Cowbell (Cowb.)	Incudine Cencerro	Enclume Sonnailles <i>or</i> Cloches à vache	Amboss Kuhglocken <i>or</i> Kuhschellen
Tam-tam (Tam-Tam) Gong (Gong)	Tamtam Gong	Tam-tam Gong	Tamtam Gong
Metal wind chimes (Metal W. Ch.)	Bacchette di metallo sospese	Baguettes metalliques suspendues	Metall-Windglocken
Wooden wind chimes (Wooden W. Ch.)	Bacchette di legno sospese	Baguettes de bois suspendues	Holz-Windglocken
Bamboo wind chimes (Bamboo W. Ch.)	Tubi di bambù	Bambou suspendu	Bambusrohre

<i>English</i>	<i>Italian</i>	<i>French</i>	<i>German</i>
Glass wind chimes (Glass W. Ch.)	Bacchette di vetro sospese	Baguettes de verre suspendues	Glas-Windglocken
Wooden Idiophones			
Wood blocks (W. Bl.)	Blocchi de legno cinese <i>or</i> Cassetina	Blocs de bois	Holzblöcke
Temple blocks (T. Bl.)	Blocchi de legno coreano	Temple-blocs	Tempel-Blöcke
Claves (Claves)	Claves	Claves	Claves <i>or</i> Holzstab
Castanets (Cast.)	Castagnette <i>or</i> Nacchere	Castagnettes	Kastagnetten
Sandpaper blocks (Sand Bl.)	Carta vetrata	Papier de verre	Sandpapier <i>or</i> Sandblöcke
Ratchet (Ratch.)	Raganella	Crécelle	Ratsche
Slapstick <i>or</i> Whip (Slapstick)	Frusta	Fouet	Peitsche
Membranophones			
Snare drum (S. Dr.)	Tamburo piccolo <i>or</i> Tamburo militare	Caisse claire <i>or</i> Tambour militaire	Kleine Trommel
(with snares on)	(colle corde)	(avec timbres)	(mit Schnarrsaite)
(with snares off)	(senza le corde)	(sans timbres)	(ohne Schnarrsaite)
Tenor drum (Ten. Dr.)	Cassa rullante	Caisse roulante	Wirbeltrommel <i>or</i> Rührtrommel
Bass drum (Bs. Dr.)	Gran cassa <i>or</i> Gran tamburo	Grosse caisse	Grosse Trommel
(upright)	(verticale)	(verticale)	(aufrecht)
(on side)	(orizzontale)	(à plat)	(liegend)
Tom-Toms (Tom-Toms)	Tom-tom	Tom-tom	Tom-Tom
Timbales (Timb.)	Timpanetti	Timbales cubaines	Kuba-Pauken
Bongos (Bong.)	Bongos <i>or</i> Bonghi	Bongos	Bongos
Conga drum (Conga)	Tumba	Conga	Conga-Trommel <i>or</i> Tumba
Tambourine (Tamb.)	Tamburo basco <i>or</i> Tamburino	Tambour de basque	Tamburin <i>or</i> Schellentrommel

FREQUENTLY USED ORCHESTRAL TERMS IN FOUR LANGUAGES

<i>English</i>	<i>Italian</i>	<i>French</i>	<i>German</i>
Muted	Con sordino Con sordini	Sourdine(s)	mit Dämpfer (<i>or</i> Gedämpft, in horns)

<i>English</i>	<i>Italian</i>	<i>French</i>	<i>German</i>
Take off mutes	Via sordini	Enlevez les sourdines	Dämpfer(n) weg
Without mute	Senza sordino	Sans sourdine	Ohne Dämpfer
In unison	Unisono (unis.)	Unis	Zusammen
Solo	Solo	Seul	Allein
All	Tutti	Tous	Alle
1. (first only), 2. a 2	1°, 2° a 2	1er, 2e à 2	1 ^{ste} (or einfach), 2 ^{te} zu 2
String	Corda	Corde	Saite
Desk or Stand	Leggio	Pupitre	Pult
Divided	Divisi (div.)	Divisé(e)s (div.)	Geteilt (get.)
Divided in 3 parts	div. a 3	div. à 3	Dreifach
Divided in 4 parts	div. a 4	div. à 4	Vierfach
Half (a string group)	la metà	la moitié	die Hälfte
At (near) the bridge	Sul ponticello	Sur le chevalet	am Steg
Over the fingerboard	Sul tasto or Sulla tastiera	Sur la touche	am Griffbrett
With the wood of the bow	Col legno	Avec le bois	Col legno or mit Holz
At the point of the bow	Punta d'arco	(de la) pointe	Spitze
At the frog	al tallone	au talon	am Frosch
In the ordinary way or Natural (after sul pont., sul tasto, etc.)	Modo ordinario	Mode ordinaire	Gewöhnlich
Near the sounding board (harp)		Près de la table	
Change to piccolo	Muta in piccolo	Changez en petite flûte	Piccolo nehmen
Change C to E (winds and timpani)	Sol muta in mi	Changez do en mi	C nach E umstimmen
Stopped (horns)	Chiuso (Chiusi)	Bouché(s)	Gestopft
Brassy		Cuivré	Schmetternd
Open	Aperto (Aperti)	Ouvert(s)	Offen
Bells in the air	Campane in aria	Pavillons en l'air	Schalltrichter auf or Schalltrichter hoch
With soft stick	Bacchetta di spugna	Baguette d'éponge (Baguette molle)	mit Schwammschlegel
With hard sticks	Bacchette di legno	Baguettes en bois	mit Holzschlegeln