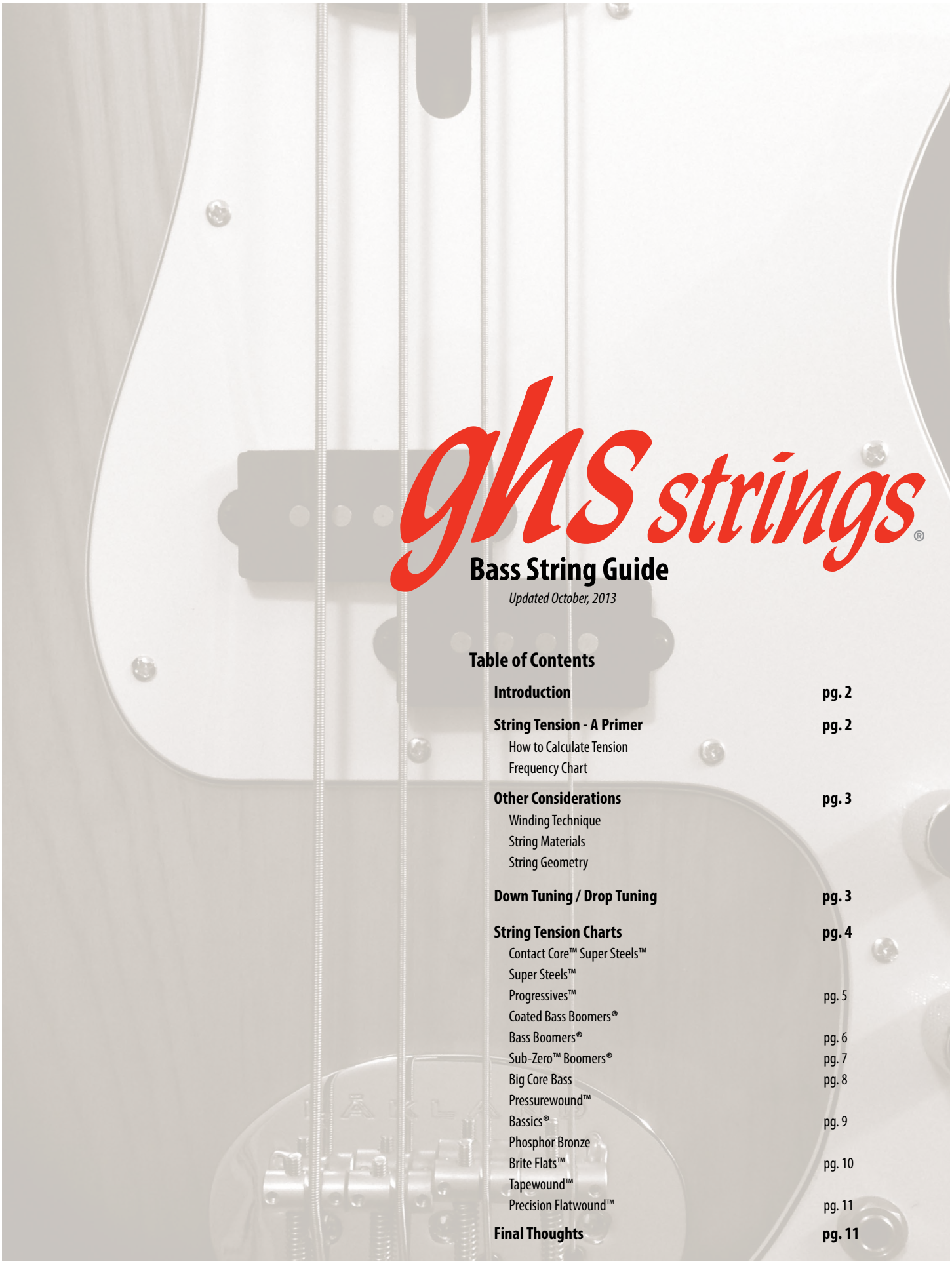

ghs strings®

Bass String Guide

Updated October, 2013

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Introduction

Whether you are a luthier, a repair tech, or someone looking to find your "ideal" set for your application, string tension will play a role. It is with this in mind that we at GHS have put together our Bass String Guide, as a way to help you find the information you are looking for to help you in whatever role you fall.

PLEASE NOTE: We have provided this guide as a reference of the tension of our strings at various pitches. Please use caution when making sets that have extremely high tensions, as the set as a whole may put undue stress on the neck, as well as snap the core of the strings prematurely.

String Tension - A Primer

How to Calculate Tension

String tension is the amount of force a string has when tuned to a specific pitch. To find out the tension of a particular string, you need three variables: the **Unit Weight**, the **Scale Length**, and the **Frequency or Pitch** of the string you will be using. We have taken the time to provide you with a comprehensive list of all of our current bass strings, in single strings as well as in our pre-packaged sets. The formulas used to this end are the industry standard, and can be used to approximate other string tensions.

For those bassists that prefer to use altered - or down - tunings, we present our tension guide in such a way as to help facilitate your endeavors, to make choosing the ideal set of strings for your application much easier.

UW **UNIT WEIGHT:** The weight of the string, measured in pounds per linear inch (lb/in).

L **SCALE LENGTH:** The vibrating length of a string. Measure the distance from the nut to the bridge of the instrument to find the scale length. GHS has used the below scale lengths in the enclosed guide; your individual instrument may vary.

- Long Scale Plus - 34"
- Standard Long Scale - 34"
- Medium Scale - 32"
- Short Scale - 30"

F **FREQUENCY or PITCH:** The specific pitch at which each note is expressed, represented in cycles per second (Hertz).

To calculate the tension of a particular string in pounds, use the formula below, inserting the three needed variables.

$$\mathbf{T}\ (\text{Tension}) = (\mathbf{UW} \times (2 \times \mathbf{L} \times \mathbf{F})^2) / 386.4$$

For those looking for a specific tension, you can use the formula below to get the unit weight for your particular needs. With that, compare the unit weight against the ones listed in the following pages to find the string gauge that meets your needs.

$$\mathbf{UW}\ (\text{Unit Weight}) = (\mathbf{T} \times 386.4) / (2 \times \mathbf{L} \times \mathbf{F})^2$$

Frequency Chart

The chart below represents the frequency or pitch of each note, as it relates to the bass fretboard. Standard tunings are shown in bold type; use the additional frequencies to calculate tension for strings when using altered tunings.

B0 30.9 Hz	**E1 41.2 Hz**	**A1 55.0 Hz**	**D2 73.4 Hz**	**G2 98.0 Hz**	**C3 130.8 Hz**	**Nut / Open**
C1 32.7 Hz	F1 43.7 Hz	A#1 58.3 Hz	D#2 77.8 Hz	G#2 103.8 Hz	C#3 138.6 Hz	**First Fret**
C#1 34.7 Hz	F#1 46.3 Hz	B1 61.7 Hz	E2 82.4 Hz	A2 110.0 Hz	D3 146.8 Hz	**Second Fret**
D1 36.7 Hz	G1 49.0 Hz	C2 65.4 Hz	F2 87.3 Hz	A#2 116.5 Hz	D#3 155.6 Hz	**Third Fret**
D#1 38.9 Hz	G#1 51.9 Hz	C#2 69.3 Hz	F#2 92.5 Hz	B2 123.5 Hz	E3 164.8 Hz	**Fourth Fret**
E1 41.2 Hz	**A1 55.0 Hz**	**D2 73.4 Hz**	**G2 98.0 Hz**	**C3 130.8 Hz**	**F3 174.6 Hz**	**Fifth Fret**

Other Considerations

A common misconception is that the tension of a string is the same as the feel of the string under your fingers. And while string tension plays a part, there are a number of other processes that will also have an affect on the tone and playability of a string.

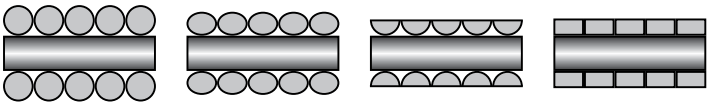
Winding Techniques

There are four types of winding techniques used for strings. The type providing the brightest tone (all else being equal) is the roundwound string. It is made with round cover wire wrapped around the core. Burnished strings are considered roundwound.

Next brightest is the rollerwound string. The round cover wire is crushed to a semi-flat configuration as it is wound around the core. Our Pressurewounds are an example of a rollerwound string.

Next, and "mid-bright," is the groundwound type of string. This string starts as a roundwound; then it is ground by a centerless grinder which removes almost half of the round cover wire, leaving a smooth-feeling surface. Our Brite Flats are a groundwound string.

Finally, the flatwound string produces the darkest, or mellowest, tone. This string is made by winding a flat, or "ribbon," wire around the core. The string is then ground. It is the smoothest feeling type of string.



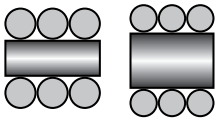
Roundwound **Rollerwound** **Groundwound** **Flatwound**

String Materials

The hardness of common materials used in the cover wire of strings affects both the tone and "feel" of a string. Usually, with all else remaining constant, the harder the material the brighter the string. This relationship shows why stainless steel produces a very bright sound and nickel, a softer material, produces a warmer sound. However, a hard material can be abrasive to both fingers and frets. At GHS, our unique "Alloy 52," used in Progressives and other strings, is softer and less abrasive than stainless steel but produces a tone almost as bright. Common cover wire materials include (ranked by order of brightness) stainless steel, Alloy 52, nickel plated steel, pure nickel, and for acoustics, brass and bronze. The core wire for all strings and all plain steel strings (both acoustic and electric) are made from tin plated Swedish steel.

String Geometry

"String Geometry" generally refers to the ratio of the core wire diameter to the cover wire diameter. These two parameters can be varied to come up with the same final string gauge. With all else remaining constant, a small core-to-cover ratio generally results in a string with greater flexibility and brighter tone. A larger core-to-cover ratio generally results in a string with greater volume, sustain, tone life and durability. In addition, a larger core-to-cover ratio aids in retaining consistent tension and feel for down tuning or drop tuning.



Small Ratio **Large Ratio**

Down Tuning / Drop Tuning

Even with the advent of the 5 string bass, many musicians opt to down tune their regular 4 string bass (traditionally strung GDAE) to drop tuning, or even down tuning all four strings, in an effort to cover sub-sonic territories. For many, this results in strings that are too loose to play with any amount of force, as well as the added fret noise that is attributed.

In an effort make down tuning and drop tuning easier, we have provided this guide that lists a number of our most popular gauges and how they fare when detuned to specific pitches. This was done simply by playing each set of strings, and down tuning them to the point where they were considered unplayable.

Drop Tuning Legend

- Can handle detuning, no problem
- Strings loose; starting to affect tone and feel
- String unplayable; tone and fret noise are bad

Detuning / Drop Tuning Guide

4-String Bass Sets

Cat. No.	Drop D GDAD	D# Standard F#C#G#D#	Drop C# F#C#G#C#	D Standard FCGD	Drop C FCGC	1 1/2 Step EBF#C#	Drop B EBF#B
Contact Core Super Steels M5200							
Super Steels M5000							
Progressives M8000							
Bass Boomers M3045							
Big Core Bass 4-RMB							
Pressurewound M7200							
Brite Flats M3075							
Precision Flats M3050							

Contact Core™ Super Steels™ - Tension

By Individual String - Standard Long Scale

Cat. No.	Unit Weight	F3	E3	D3	C3	B2	A2	G2	F2	E2	D2	C2	B1	A1	G1	F1	E1	D1	C1	B0	A0	G0
CC60	**.00064841**								59.2	52.7	**41.8**	33.2	29.6	23.5	18.6							
CC65	**.00072849**									59.2	**47.0**	37.3	33.2	26.4	20.9	16.6						
CC80	**.00110296**											56.5	50.3	**39.9**	31.7	25.1	22.4	17.8				
CC85	**.00122664**												55.9	**44.4**	35.2	27.9	24.9	19.8	15.7			
CC100	**.00168265**														48.3	38.4	**34.2**	27.1	21.5	19.2	15.2	
CC105	**.00187551**														53.9	42.7	**38.1**	30.2	24.0	21.4	16.9	
CC125	**.00272903**																55.4	44.0	34.9	**31.1**	24.7	19.6
CC129	**.00304755**																	49.1	39.0	**34.7**	27.6	21.9

By Available Sets

Standard Long Scale *(Fits 34" Scale)*

4-String Bass Sets

Cat. No.	1-G	2-D	3-A	4-E
L5200	STB40	CC60	CC80	CC100
Light Gauge	33.5	41.8	39.9	34.2
M5200	STB44	CC65	CC85	CC105
Medium Gauge	44.3	47.0	44.4	38.1

5+ String Bass Sets

Cat. No.	High C	1-G	2-D	3-A	4-E	5-B
5L-CC		STB40	CC60	CC80	CC100	CC125
Light Gauge		33.5	41.8	39.9	34.2	31.1
5M-CC		STB44	CC65	CC85	CC105	CC129
Medium Gauge		44.3	47.0	44.4	38.1	34.7

Super Steels™ - Tension

By Individual String - Long Scale Plus

Cat. No.	Unit Weight	F3	E3	D3	C3	B2	A2	G2	F2	E2	D2	C2	B1	A1	G1	F1	E1	D1	C1	B0	A0	G0
STB027	**.00016212**		52.7	41.8	**33.2**	29.6	23.5	18.6														
STB030	**.00017301**		56.3	44.6	**35.4**	31.6	25.0	19.9	15.8													
STB040	**.00029172**					53.2	42.3	**33.5**	26.6	23.7	18.8											
STB044	**.00038523**						55.8	**44.3**	35.1	31.3	24.9	19.7	17.6									
STB046	**.00040243**						58.3	**46.3**	36.7	32.7	25.9	20.6	18.3									
STB050	**.00048386**							**55.6**	44.1	39.3	**31.2**	24.8	22.1									
STB058	**.00059786**								54.5	48.6	**38.6**	30.6	27.3	21.6	17.2							
STB063	**.00077190**										**49.8**	39.5	35.2	27.9	22.2	17.6						
STB067	**.00082542**										**53.3**	42.3	37.7	29.9	23.7	18.8						
STB070	**.00095418**											48.8	43.5	**34.5**	27.4	21.7						
STB075	**.00104534**											53.5	47.7	**37.8**	30.0	23.8	21.3	16.8				
STB080	**.00113651**											58.2	51.8	**41.1**	32.6	25.9	23.1	18.3				
STB084	**.00129257**												58.9	**46.8**	37.1	29.5	26.2	20.8	16.5			
STB090	**.00136385**													**49.4**	39.2	31.1	**27.7**	22.0	17.4			
STB098	**.00181843**														52.2	41.5	**36.9**	29.3	23.3	20.7	16.5	
STB102	**.00200935**														57.7	45.8	**40.8**	32.4	25.7	22.9	18.2	
STB106	**.00214559**															48.9	**43.6**	34.6	27.5	24.5	19.4	15.3
STB121	**.00279247**																56.7	45.0	35.7	**31.8**	25.3	20.0
STB126	**.00291823**																59.3	47.1	37.3	**33.3**	26.4	21.0

By Available Sets

Long Scale Plus *(Fits 34", 35", 36" Scale)*

4-String Bass Sets

Cat. No.	1-G	2-D	3-A	4-E
L5000	STB40	STB58	STB80	STB102
Light Gauge	33.5	38.6	41.1	40.8
ML5000	STB44	STB63	STB80	STB102
Medium Light Gauge	44.3	49.8	41.1	40.8
M5000	STB44	STB63	STB84	STB106
Medium Gauge	44.3	49.8	46.8	43.6
CM5000	STB46	STB67	STB80	STB106
Custom Medium Gauge	46.3	53.3	41.1	43.6

Standard Long Scale *(Fits 34" Scale)*

5+ String Bass Sets

Cat. No.	High C	1-G	2-D	3-A	4-E	5-B
5ML-STB		STB44	STB63	STB80	STB98	STB121
Medium Light Gauge		44.3	49.8	41.1	36.9	31.8
5M-STB		STB44	STB63	STB84	STB106	STB126
Medium Gauge		44.3	49.8	46.8	43.6	33.3
6L-STB	STB27	STB40	STB58	STB80	STB102	STB126
Medium	33.2	33.5	38.6	41.1	40.8	33.3

Progressives™ - Tension

By Individual String - Long Scale Plus

Cat. No.	Unit Weight	F3	E3	D3	C3	B2	A2	G2	F2	E2	D2	C2	B1	A1	G1	F1	E1	D1	C1	B0	A0	G0
PRB030	**.00014882**	54.3	48.4	38.4	**30.5**	27.2	21.5	17.1														
PRB035	**.00022588**				58.3	41.2	32.7	**26.0**	20.6	18.4												
PRB040	**.00028882**					52.7	41.8	**33.2**	26.3	23.5	18.6											
PRB045	**.00039303**						56.9	**45.2**	35.8	31.9	25.4	20.1	17.9									
PRB055	**.00048831**								44.5	39.7	**31.5**	25.0	22.3	17.7								
PRB060	**.00064823**								59.1	52.7	**41.8**	33.2	29.6	23.5	18.6							
PRB065	**.00073558**									59.7	**47.4**	37.7	33.6	26.6	21.1	16.8						
PRB080	**.00113235**											58.0	51.6	**41.0**	32.5	25.8	23.0	18.3				
PRB085	**.00135735**													**49.1**	39.0	30.9	27.6	21.9	17.4			
PRB095	**.00169529**														48.7	38.7	**34.4**	27.4	21.7	19.3	15.3	
PRB100	**.00183720**														52.8	41.9	**37.3**	29.6	23.5	20.9	16.6	
PRB105	**.00187199**														53.8	42.7	**38.0**	30.2	24.0	21.3	16.9	
PRB126	**.00240211**																48.8	38.7	30.7	**27.4**	21.7	17.2
PRB131	**.00276601**																56.2	44.6	35.4	**31.5**	25.0	19.9

By Available Sets

Long Scale Plus *(Fits 34", 35", 36" Scale)*

4-String Bass Sets

Cat. No.	1-G	2-D	3-A	4-E
XL8000 Extra Light Gauge	PRB35 26.0	PRB55 31.5	PRB75 34.5	PRB95 34.4
L8000 Light Gauge	PRB40 33.2	PRB60 41.8	PRB80 41.0	PRB100 37.3
M8000 Medium Gauge	PRB45 45.2	PRB65 47.4	PRB85 49.1	PRB105 38.0

5+ String Bass Sets

Cat. No.	High C	1-G	2-D	3-A	4-E	5-B
5L8000 Light Gauge		PRB40 33.2	PRB60 41.8	PRB80 41.0	PRB100 37.3	PRB126 27.4
5M8000 Medium Gauge		PRB45 45.2	PRB65 47.4	PRB85 49.1	PRB105 38.0	PRB131 31.5

Coated Bass Boomers® - Tension

By Individual String - Long Scale Plus

Cat. No.	Unit Weight	F3	E3	D3	C3	B2	A2	G2	F2	E2	D2	C2	B1	A1	G1	F1	E1	D1	C1	B0	A0	G0
CB-DYB40	**.00028555**					52.1	41.3	**32.8**	26.0	23.2	18.4											
CB-DYB45	**.00035533**						51.4	**40.8**	32.4	28.9	22.9	18.2	16.2									
CB-DYB55	**.00052932**							60.8	48.3	43.0	**34.1**	27.1	24.1	19.2	15.2							
CB-DYB65	**.00067118**								61.2	54.5	**43.3**	34.4	30.6	24.3	19.3	15.3						
CB-DYB75	**.00097717**										63.0	50.0	44.6	**35.4**	28.1	22.3	19.8	15.7				
CB-DYB80	**.00107947**											55.3	49.2	**39.1**	31.0	24.6	21.9	17.4				
CB-DYB85	**.00129817**												59.2	**47.0**	37.3	29.6	26.4	20.9	16.6			
CB-DYB95	**.00153675**													55.6	44.1	35.0	**31.2**	24.8	19.7	17.5		
CB-DYB100	**.00167707**													60.7	48.2	38.2	**34.1**	27.0	21.5	19.1		
CB-DYB105	**.00188202**														54.1	42.9	**38.2**	30.3	24.1	21.4	17.0	

By Available Sets

Long Scale Plus *(Fits 34", 35", 36" Scale)*

4-String Bass Sets

Cat. No.	1-G	2-D	3-A	4-E
CB-L3045 Light Gauge	CB-DYB40 32.8	CB-DYB55 34.1	CB-DYB75 35.4	CB-DYB95 31.2
CB-ML3045 Medium Light Gauge	CB-DYB45 40.8	CB-DYB65 43.3	CB-DYB80 39.1	CB-DYB100 34.1
CB-M3045 Medium Gauge	CB-DYB45 40.8	CB-DYB65 43.3	CB-DYB85 47.0	CB-DYB105 38.2

Bass Boomers® - Tension

By Individual String - Long Scale Plus

Cat. No.	Unit Weight	F3	E3	D3	C3	B2	A2	G2	F2	E2	D2	C2	B1	A1	G1	F1	E1	D1	C1	B0	A0	G0
DYB30X	.00017947			46.3	**36.7**	32.7	26.0	20.6	16.4													
DYB40X	.00031887					58.2	46.2	**36.6**	29.1	25.9	20.6	16.3										
DYB45X	.00041633							**47.8**	38.0	33.8	26.8	21.3	18.9									
DYB50X	.00047323							54.4	43.2	38.5	**30.5**	24.2	21.6	17.1								
DYB55X	.00057105								52.1	46.4	**36.8**	29.2	26.0	20.7	16.4							
DYB65X	.00080788										**52.2**	41.4	36.8	29.2	23.2	18.4	16.4					
DYB70X	.00091866										59.3	47.0	41.9	**33.2**	26.4	20.9	18.7					
DYB75X	.00104534											53.5	47.7	**37.8**	30.0	23.8	21.2	16.8				
DYB80X	.00131659													**47.6**	37.8	30.0	26.7	21.2	16.8			
DYB85X	.00141093													**51.1**	40.5	32.2	28.7	22.8	18.0			
DYB90X	.00155487													56.3	44.7	35.4	**31.6**	25.1	19.9			
DYB95X	.00178139														51.2	40.6	**36.2**	28.7	22.8	20.3		
DYB100X	.00193456														55.6	44.1	**39.3**	31.2	24.8	22.0		
DYB105X	.00214494															48.9	**43.6**	34.6	27.4	24.4	19.4	

By Individual String - Standard Long Scale

Cat. No.	Unit Weight	F3	E3	D3	C3	B2	A2	G2	F2	E2	D2	C2	B1	A1	G1	F1	E1	D1	C1	B0	A0	G0
PB18	.00007270	**26.5**	23.6	18.7																		
PB20	.00008410	**30.7**	27.3	21.7	17.2																	
DYB20	.00009726	35.5	31.6	25.1	**19.9**	17.7																
DYB25	.00014277	52.1	46.4	36.8	**29.3**	26.0	20.7	16.4														
DYB30	.00018173			46.8	**37.2**	33.2	26.3	20.9	16.6													
DYB35	.00022576				**46.2**	41.2	32.7	**26.0**	20.6	18.4												
DYB40	.00029254					53.4	42.3	**33.6**	26.7	23.8	18.9											
DYB45	.00039025						56.5	**44.8**	35.6	31.7	25.2	20.0	17.8									
DYB50	.00044866							**51.6**	40.9	36.5	**28.9**	22.9	20.5									
DYB55	.00054649								49.9	44.4	**35.3**	28.0	24.9	19.8								
DYB60	.00065431								59.7	53.2	**42.2**	33.5	29.8	23.7	18.8							
DYB65	.00077758										**50.2**	39.8	35.5	28.1	22.3	17.7						
DYB70	.00087143										**56.2**	44.6	39.7	**31.5**	25.0	19.8						
DYB75	.00099196											50.8	45.3	**35.9**	28.5	22.6	20.1	16.0				
DYB80	.00124296												56.7	**45.0**	35.7	28.3	25.2	20.0	15.9			
DYB85	.00136441													**49.4**	39.2	31.1	27.7	22.0	17.5			
DYB95	.00177657														51.0	40.5	**36.1**	28.6	22.7	20.2	16.0	
DYB100	.00186258														53.5	42.5	**37.8**	30.0	23.8	21.2	16.8	
DYB105	.00207884														59.7	47.4	**42.2**	33.5	26.6	23.7	18.8	
DYB110	.00246386															56.2	**50.0**	39.7	31.5	28.1	22.3	
DYB115	.00241806															55.2	**49.1**	39.0	30.9	**27.6**	21.9	
DYB120	.00274276																55.7	44.3	35.1	**31.3**	24.8	
DYB125	.00303173																	48.9	38.8	**34.6**	27.4	21.8
DYB126	.00296169																	47.0	37.3	**33.3**	26.4	20.9
DYB130	.00338012																	54.5	43.2	**38.5**	30.6	24.3

By Individual String - Medium Scale

Cat. No.	Unit Weight	F3	E3	D3	C3	B2	A2	G2	F2	E2	D2	C2	B1	A1	G1	F1	E1	D1	C1	B0	A0	G0
3041 (.045)	.00041107						52.7	**41.8**	33.2	29.6	23.4	18.6	16.6									
3042 (.065)	.00064630								52.3	46.5	**36.9**	29.3	26.1	20.7	16.4							
3143 (.080)	.00110995											50.3	44.8	**35.6**	28.3	22.4	20.0	15.9				
3043 (.085)	.00124381											56.4	50.3	**39.9**	31.6	25.1	22.4	17.8				
3144 (.100)	.00169832													54.5	43.2	34.3	**30.5**	24.3	19.3	17.1		
3044 (.105)	.00181699													58.3	46.2	36.7	**32.7**	26.0	20.6	18.4		

By Individual String - Short Scale

Cat. No.	Unit Weight	F3	E3	D3	C3	B2	A2	G2	F2	E2	D2	C2	B1	A1	G1	F1	E1	D1	C1	B0	A0	G0
3136 (.045)	.00041435					58.8	46.7	**37.1**	29.4	26.2	20.8	16.5										
3036 (.050)	.00047666						53.7	**42.6**	33.8	30.2	23.9	19.0	16.9									
3137 (.060)	.00066895							59.8	47.5	42.3	**33.6**	26.7	23.7	18.8								
3037 (.070)	.00088008									55.7	**44.2**	35.1	31.3	24.8	19.7	15.6						
3138 (.075)	.00099367										49.9	39.6	35.3	**28.0**	22.2	17.6	15.7					
3038 (.090)	.00147901											58.9	52.5	**41.7**	33.1	26.2	23.4	18.6				
3139 (.095)	.00162311												57.6	45.7	36.3	28.8	**25.7**	20.4	16.2			
3039 (.107)	.00208113													58.6	46.6	36.9	**32.9**	26.1	20.7	18.5		

Bass Boomers® - Tension *(cont.)*

By Available Sets

Long Scale Plus *(Fits 34", 35", 36" Scale)*

4-String Bass Sets

Cat. No.	1-G	2-D	3-A	4-E
P3045 Piccolo Gauge	PB18 33.4	DYB30X 46.3	DYB40X 46.2	DYB50X 38.5
L3045X Light Gauge	DYB40X 36.6	DYB55X 36.8	DYB75X 37.8	DYB95X 36.2
ML3045X Medium Light Gauge	DYB45X 47.8	DYB65X 52.2	DYB80X 47.6	DYB100X 39.3
M3045X Medium Gauge	DYB45X 47.8	DYB65X 52.2	DYB85X 51.1	DYB105X 43.6

5+ String Bass Sets

Cat. No.	High C	1-G	2-D	3-A	4-E	5-B
5M-C-DYB Medium Gauge	DYB30X 36.7	DYB45X 47.8	DYB65X 52.2	DYB80X 47.6	DYB100X 39.3	
8LS-DYB Regular Gauge	Octaves	PB20 38.6	DYB25 36.8	DYB35 32.7	DYB45X 33.8	
	Regulars	DYB40X 36.6	DYB55X 36.8	DYB70X 33.2	DYB90X 31.6	

Medium Scale *(Fits 32", 33" Scale)*

4-String Bass Sets

Cat. No.	1-G	2-D	3-A	4-E
3140 Medium Light Gauge	3041 (.045") 41.8	3042 (.065") 36.9	3143 (.080") 35.6	3144 (.100") 30.5
3040 Regular Gauge	3041 (.045") 41.8	3042 (.065") 36.9	3043 (.085") 39.9	3044 (.105") 32.7

Short Scale *(Fits 30", 31" Scale)*

4-String Bass Sets

Cat. No.	1-G	2-D	3-A	4-E
3135 Light Gauge	3136 (.045") 37.1	3137 (.060") 33.6	3138 (.075") 28.0	3139 (.095") 25.7
3035 Regular Gauge	3036 (.050") 42.6	3037 (.070") 44.2	3038 (.090") 41.7	3039 (.107") 32.9

Standard Long Scale *(Fits 34" Scale)*

4-String Bass Sets

Cat. No.	1-G	2-D	3-A	4-E
XL3045 Extra Light Gauge	DYB30 20.9	DYB50 28.9	DYB70 31.5	DYB90 27.8
L3045 Light Gauge	DYB40 33.6	DYB55 35.2	DYB75 35.9	DYB95 36.1
ML3045 Medium Light Gauge	DYB45 44.8	DYB65 50.1	DYB80 45.0	DYB100 37.8
M3045 Medium Gauge	DYB45 44.8	DYB65 50.1	DYB85 49.4	DYB105 42.2
M3045F Flea Signature Set	DYB45 44.8	DYB65 50.1	DYB85 49.4	DYB105 42.2
H3045 Heavy Gauge	DYB50 51.3	DYB70 56.2	DYB95 64.3	DYB115 49.2

5+ String Bass Sets

Cat. No.	High C	1-G	2-D	3-A	4-E	5-B
5L-DYB Light Gauge		DYB40 33.6	DYB55 35.2	DYB75 35.9	DYB95 36.1	DYB120 31.3
5ML-DYB Medium Light Gauge		DYB45 44.8	DYB65 50.1	DYB80 45.0	DYB100 37.8	DYB126 33.2
5M-DYB Medium Gauge		DYB45 44.8	DYB65 50.1	DYB85 49.4	DYB105 42.2	DYB130 38.5
6ML-DYB Medium Light Gauge	DYB30 37.2	DYB45 44.8	DYB65 50.1	DYB80 45.0	DYB100 42.2	DYB126 33.2

Sub-Zero™ Boomers® - Tension

By Individual String - Long Scale Plus

Cat. No.	Unit Weight	F3	E3	D3	C3	B2	A2	G2	F2	E2	D2	C2	B1	A1	G1	F1	E1	D1	C1	B0	A0	G0
CR-DYB40	**.00029309**					53.4	42.4	**33.7**	26.7	23.8	18.9	15.0										
CR-DYB45	**.00036274**						52.5	**41.7**	33.1	29.5	23.4	18.6	16.5									
CR-DYB55	**.00054476**							62.6	49.7	44.3	**35.1**	27.9	24.8	19.7	15.6							
CR-DYB65	**.00070297**									57.1	**45.3**	36.0	32.1	25.4	20.2	16.0						
CR-DYB75	**.00097782**										63.1	50.1	44.6	**35.4**	28.1	22.3	19.8	15.7				
CR-DYB80	**.00110418**											56.5	50.4	**40.0**	31.7	25.2	22.4	17.8				
CR-DYB85	**.00127309**												58.1	**46.1**	36.6	29.0	25.7	20.5	16.3			
CR-DYB95	**.00153967**													55.7	44.3	35.1	**31.3**	24.8	19.7	17.5		
CR-DYB100	**.00174643**														50.2	39.8	**35.5**	28.2	22.3	20.0		
CR-DYB105	**.00192140**														55.2	42.8	**39.0**	30.9	24.6	21.9	17.4	

By Available Sets

Long Scale Plus *(Fits 34", 35", 36" Scale)*

4-String Bass Sets

Cat. No.	1-G	2-D	3-A	4-E
CR-L3045 Light Gauge	CR-DYB40 33.7	CR-DYB55 35.1	CR-DYB75 35.4	CR-DYB95 31.3
CR-ML3045 Medium Light Gauge	CR-DYB45 41.7	CR-DYB65 45.3	CR-DYB80 40.0	CR-DYB100 35.5
CR-M3045 Medium Gauge	CR-DYB45 41.7	CR-DYB65 45.3	CR-DYB85 46.1	CR-DYB105 39.0

Big Core Bass - Tension

By Individual String - Standard Long Scale

Cat. No.	Unit Weight	F3	E3	D3	**C3**	B2	A2	**G2**	F2	E2	**D2**	C2	B1	**A1**	G1	F1	**E1**	D1	C1	**B0**	A0	G0
1 (.045)	**.00038905**						56.3	**44.7**	35.5	31.6	25.1	19.9	17.7									
2 (.065)	**.00077810**										**50.2**	39.8	35.5	28.2	22.3	17.7						
3 (.085)	**.00136168**													**49.3**	39.1	31.0	27.6	21.9	17.4			
4 (.105)	**.00201009**														57.7	45.8	**40.8**	32.4	25.7	22.9	18.2	

By Available Sets

Standard Long Scale *(Fits 34" Scale)*

4-String Bass Sets

Cat. No.	1-G	2-D	3-A	4-E
4-RMB	1 (.045")	2 (.065")	3 (.085")	4 (.105")
Medium Gauge	44.7	50.2	49.3	40.8

Pressurewound™ - Tension

By Individual String

Cat. No.	Unit Weight	**F3**	E3	D3	**C3**	B2	A2	**G2**	F2	E2	**D2**	C2	B1	**A1**	G1	F1	**E1**	D1	C1	**B0**	A0	G0
PWB028	**.00016178**		52.6	41.7	**33.2**	29.5	23.4	18.6														
PWB040	**.00032349**					59.0	46.8	**37.2**	29.5	26.3	20.8	16.6										
PWB044	**.00037715**						54.6	**43.3**	34.4	30.6	24.3	19.3	17.2									
PWB054	**.00056615**								51.6	46.0	**36.5**	29.0	25.8	20.5	16.3							
PWB058	**.00064945**								59.2	52.8	**41.9**	33.2	29.6	23.5	18.7							
PWB062	**.00075360**										**48.6**	38.6	34.4	27.3	21.7	17.2						
PWB076	**.00108491**											55.5	49.5	**39.3**	31.2	24.7	22.0	17.5				
PWB080	**.00123089**												56.1	**44.6**	35.4	28.1	25.0	19.8	15.8			
PWB084	**.00130260**												59.4	**47.2**	37.4	29.7	26.5	21.0	16.7			
PWB096	**.00168590**														48.4	38.4	**34.2**	27.2	21.6	19.2	15.3	
PWB102	**.00194575**														55.9	44.4	**39.5**	31.4	24.9	22.2	17.6	
PWB106	**.00236502**															53.9	**48.0**	38.1	30.3	26.9	21.4	
PWB128	**.00297998**																	48.0	38.1	**34.0**	27.0	21.4

By Individual String - Short Scale

Cat. No.	Unit Weight	**F3**	E3	D3	**C3**	B2	A2	**G2**	F2	E2	**D2**	C2	B1	**A1**	G1	F1	**E1**	D1	C1	**B0**	A0	G0
7701 (.040)	**.00033069**				52.7	46.9	37.3	**29.6**	23.5	20.9	16.6											
7702 (.054)	**.00060118**							53.8	42.7	38.0	**30.2**	24.0	21.3	16.9								
7703 (.076)	**.00128603**											51.3	45.7	**36.2**	28.8	22.8	20.3	16.1				
7704 (.096)	**.00183720**													51.8	41.1	32.6	**29.1**	23.1	18.3	16.3		

By Available Sets

Standard Long Scale *(Fits 34" Scale)*

4-String Bass Sets

Cat. No.	1-G	2-D	3-A	4-E
L7200	PWB40	PWB54	PWB76	PWB96
Light Gauge	37.2	36.5	39.3	34.2
ML7200	PWB44	PWB58	PWB80	PWB102
Medium Light Gauge	43.3	41.9	44.6	39.5
M7200	PWB44	PWB62	PWB84	PWB106
Medium Gauge	43.3	48.6	47.2	48.0

5+ String Bass Sets

Cat. No.	High C	1-G	2-D	3-A	4-E	5-B
M7200-5		PWB44	PWB62	PWB84	PWB106	PWB128
Medium Gauge		43.3	48.6	47.2	48.0	34.0

Short Scale *(Fits 30", 31" Scale)*

4-String Bass Sets

Cat. No.	1-G	2-D	3-A	4-E
7700	7701 (.040")	7702 (.054")	7703 (.076")	7704 (.096")
Light Gauge	29.6	30.2	36.2	29.1

Bassics® - Tension

By Individual String - Standard Long Scale

Cat. No.	Unit Weight	F3	E3	D3	C3	B2	A2	G2	F2	E2	D2	C2	B1	A1	G1	F1	E1	D1	C1	B0	A0	G0
BAS40	**.00029758**					54.3	43.1	**34.2**	27.1	24.2	19.2	15.2										
BAS44	**.00034672**						50.2	**39.8**	31.6	28.2	22.4	17.8	15.8									
BAS58	**.00061412**								56.0	49.9	**39.6**	31.4	28.0	22.3	17.6							
BAS63	**.00074073**										**47.8**	37.9	33.8	26.8	21.3	16.9	15.0					
BAS80	**.00116093**											59.4	52.9	**42.0**	33.3	26.5	23.6	18.7				
BAS84	**.00130673**												59.6	**47.3**	37.5	29.8	26.5	21.1	16.7			
BAS102	**.00187526**														53.8	42.7	**38.1**	30.2	24.0	21.4		
BAS106	**.00202522**														58.2	46.2	**41.1**	32.7	25.9	23.1		
BAS130	**.00372768**																		47.7	**42.5**	33.7	26.7

By Available Sets

Long Scale Plus *(Fits 34", 35", 36" Scale)*

4-String Bass Sets

Cat. No.	1-G	2-D	3-A	4-E
L6000 Light Gauge	BAS40 34.2	BAS58 39.6	BAS80 42.0	BAS102 38.1
ML6000 Medium Light Gauge	BAS44 39.8	BAS63 47.8	BAS80 42.0	BAS102 38.1
M6000 Medium Gauge	BAS44 39.8	BAS63 47.8	BAS84 47.3	BAS106 41.1

5+ String Bass Sets

Cat. No.	High C	1-G	2-D	3-A	4-E	5-B
M6000-5 Medium Gauge		BAS44 39.8	BAS63 47.8	BAS84 47.3	BAS106 41.1	BAS130 42.5

Phosphor Bronze - Tension

By Individual String - Standard Long Scale

Cat. No.	Unit Weight	F3	E3	D3	C3	B2	A2	G2	F2	E2	D2	C2	B1	A1	G1	F1	E1	D1	C1	B0	A0	G0
PHB40	**.00027654**					50.4	40.0	**31.8**	25.2	22.5	17.8											
PHB56	**.00053857**								49.1	43.8	**34.7**	27.6	24.6	19.5	15.5							
PHB76	**.00095707**											49.0	43.6	**34.6**	27.5	21.8	19.4	15.4				
PHB96	**.00146752**													53.1	42.2	33.5	**29.8**	23.7	18.8	16.7		
PHB123	**.00290778**																59.1	46.9	37.2	**33.2**	26.3	20.8

By Individual String - Short Scale

Cat. No.	Unit Weight	F3	E3	D3	C3	B2	A2	G2	F2	E2	D2	C2	B1	A1	G1	F1	E1	D1	C1	B0	A0	G0
9201 (.040)	**.00033299**				53.1	47.3	37.5	**29.8**	23.7	21.1	16.7											
9202 (.058)	**.00044341**						50.0	39.7	31.5	28.0	**22.3**	17.7	15.7									
9203 (.076)	**.00098392**										49.4	39.2	34.9	**27.7**	22.0	17.5	15.6					
9204 (.096)	**.00147683**												52.4	41.6	33.0	26.2	**23.4**	18.5				

By Available Sets

Standard Long Scale *(Fits 34" Scale)*

4-String Bass Sets

Cat. No.	1-G	2-D	3-A	4-E
L9000 Light Gauge	PHB40 31.8	PHB56 34.7	PHB76 34.6	PHB96 29.8

Short Scale *(Fits 30", 31" Scale)*

4-String Bass Sets

Cat. No.	1-G	2-D	3-A	4-E
9200 Light Gauge	9201 (.040") 29.8	9202 (.058") 22.3	9203 (.076") 27.7	9204 (.096") 23.4

Brite Flats™ - Tension

By Individual String - Long Scale Plus

Cat. No.	Unit Weight	F3	E3	D3	C3	B2	A2	G2	F2	E2	D2	C2	B1	A1	G1	F1	E1	D1	C1	B0	A0	G0
BF027	**.00016294**		52.3	42.0	**33.4**	29.7	23.6	18.7														
BF045	**.00033286**						48.2	**38.3**	30.4	27.0	21.5	17.0	15.2									
BF049	**.00037284**						54.0	**42.8**	34.0	30.3	24.0	19.1	17.0									
BF052	**.00045956**							**52.8**	41.9	37.3	29.6	23.5	20.9	16.3								
BF056	**.00055712**								50.8	45.3	**35.9**	28.5	25.4	20.2	16.0							
BF062	**.00068278**									55.5	**44.0**	34.9	31.1	24.7	19.6	15.6						
BF065	**.00074284**										**47.9**	38.0	33.9	26.9	21.3	16.9						
BF077	**.00108720**											55.7	49.6	**39.3**	31.3	24.8	22.1	17.5				
BF084	**.00136654**													**49.5**	39.3	31.1	27.7	22.0	17.5			
BF098	**.00191153**														54.9	43.6	**38.8**	30.8	24.5	21.8	17.3	
BF103	**.00206683**														59.4	47.1	**42.0**	33.3	26.4	23.6	18.7	
BF108	**.00220740**															50.3	**44.8**	35.6	28.2	25.2	20.0	
BF129	**.00319394**																	51.5	40.8	**36.4**	28.9	22.9

By Individual String - Medium Scale

Cat. No.	Unit Weight	F3	E3	D3	C3	B2	A2	G2	F2	E2	D2	C2	B1	A1	G1	F1	E1	D1	C1	B0	A0	G0
3066 (.049)	**.00045345**						58.2	**46.2**	36.6	32.7	25.9	20.6	18.3									
3067 (.062)	**.00069298**								56.0	49.8	**39.6**	31.4	28.0	22.2	17.6							
3068 (.084)	**.00120910**											54.8	48.8	**38.8**	30.8	24.4	21.7	17.3				
3069 (.108)	**.00169724**														43.2	34.3	**30.6**	24.3	19.2	17.1		

By Individual String - Short Scale

Cat. No.	Unit Weight	F3	E3	D3	C3	B2	A2	G2	F2	E2	D2	C2	B1	A1	G1	F1	E1	D1	C1	B0	A0	G0
3071 (.049)	**.00047964**						54.1	**42.9**	34.1	30.3	24.1	19.1	17.0									
3072 (.062)	**.00072449**								51.4	45.8	**36.4**	28.9	25.7	20.4	16.2							
3073 (.084)	**.00125724**											50.1	44.6	**35.4**	28.1	22.3	19.9	15.8				
3074 (.108)	**.00224871**														50.3	39.9	**35.5**	28.2	22.4	19.9	15.8	

By Available Sets

Long Scale Plus *(Fits 34", 35", 36" Scale)*

4-String Bass Sets

Cat. No.	1-G	2-D	3-A	4-E
L3075	BF45	BF56	BF77	BF98
Light Gauge	38.3	35.9	39.3	38.8
ML3075	BF52	BF65	BF84	BF103
Medium Light Gauge	52.8	47.9	49.5	42.0
M3075	BF49	BF62	BF84	BF108
Medium Gauge	42.8	44.0	49.5	44.8

5+ String Bass Sets

Cat. No.	High C	1-G	2-D	3-A	4-E	5-B
M3075-5		BF49	BF62	BF84	BF108	BF129
Medium Gauge		42.8	44.0	49.5	44.8	36.4

Medium Scale *(Fits 32", 33" Scale)*

4-String Bass Sets

Cat. No.	1-G	2-D	3-A	4-E
3065	3066 (.049")	3067 (.062")	3068 (.084")	3069 (.108")
Regular Gauge	46.2	39.6	38.8	30.6

Short Scale *(Fits 30", 31" Scale)*

4-String Bass Sets

Cat. No.	1-G	2-D	3-A	4-E
3070	3071 (.049")	3072 (.062")	3073 (.084")	3074 (.108")
Regular Gauge	42.9	36.4	35.4	35.5

Tapewound™ - Tension

By Individual String - Standard Long Scale

Cat. No.	Unit Weight	F3	E3	D3	C3	B2	A2	G2	F2	E2	D2	C2	B1	A1	G1	F1	E1	D1	C1	B0	A0	G0
3061 (.050)	**.00035663**						51.6	**41.0**	32.5	29.0	23.0	18.3	16.3									
3062 (.070)	**.00074452**									60.5	**48.0**	38.1	34.0	26.9	21.4	17.0						
3063 (.090)	**.00123199**												56.2	**44.6**	35.4	28.1	25.0	19.9	15.8			
3064 (.105)	**.00168588**													61.0	48.4	38.4	**34.2**	27.2	21.6	19.2	15.2	
3065 (.125)	**.00226940**															51.7	46.1	36.6	29.0	**25.9**	20.5	16.3

By Available Sets

Standard Long Scale *(Fits 34" Scale)*

4-String Bass Sets

Cat. No.	1-G	2-D	3-A	4-E
3060	3061 (.050")	3062 (.070")	3063 (.090")	3064 (.105")
Medium Gauge	41.0	48.0	44.6	34.2

5+ String Bass Sets

Cat. No.	High C	1-G	2-D	3-A	4-E	5-B
3060-5		3061 (.050")	3062 (.070")	3063 (.090")	3064 (.105")	3065 (.125")
Medium Gauge		41.0	48.0	44.6	34.2	25.9

Precision Flatwound™ - Tension

By Individual String - Long Scale Plus, Standard Long Scale

Cat. No.	Unit Weight	F3	E3	D3	C3	B2	A2	G2	F2	E2	D2	C2	B1	A1	G1	F1	E1	D1	C1	B0	A0	G0
FB028	**.00016859**		54.8	43.5	**34.5**	30.7	24.4	19.4	15.4													
FB045	**.00036100**						52.3	**41.5**	32.9	29.3	23.3	18.5	16.5									
FB055	**.00059573**								54.3	48.4	**38.4**	30.5	27.2	21.6	17.1							
FB060	**.00072062**									58.6	**46.5**	36.9	32.9	26.1	20.7	16.4						
FB065	**.00078579**										**50.7**	40.2	35.8	28.4	22.6	17.9						
FB070	**.00096566**											49.4	44.0	34.9	27.7	22.0						
FB075	**.00106341**											54.4	48.5	**38.5**	30.5	24.2	21.6	17.1				
FB085	**.00141525**													**51.2**	40.7	32.3	27.7	22.8	18.1			
FB090	**.00157079**													56.9	45.1	35.8	**31.9**	25.3	20.1			
FB095	**.00180706**														51.9	41.0	**36.7**	29.1	23.1	20.6	16.4	
FB105	**.00221800**															50.6	**45.0**	35.8	28.4	25.3	20.0	
FB126	**.00301768**																	48.7	38.6	**34.4**	27.3	21.7

By Individual String - Short Scale

Cat. No.	Unit Weight	F3	E3	D3	C3	B2	A2	G2	F2	E2	D2	C2	B1	A1	G1	F1	E1	D1	C1	B0	A0	G0
3021 (.045)	**.00041594**					59.1	46.9	**37.2**	29.5	26.3	20.9	16.6										
3022 (.060)	**.00066346**								47.1	41.9	**33.3**	26.4	23.6	18.7								
3023 (.075)	**.00097376**										48.9	38.8	34.6	**27.4**	21.8	17.3	15.4					
3024 (.095)	**.00153294**												54.4	43.2	34.3	27.2	**24.3**	19.2	15.3			

By Available Sets

Long Scale Plus *(Fits 34", 35", 36" Scale)*

4-String Bass Sets

Cat. No.	1-G	2-D	3-A	4-E
3025	FB45	FB60	FB75	FB95
Light Gauge	41.5	46.5	38.5	36.7
M3050	FB45	FB65	FB85	FB105
Medium Gauge	41.5	50.7	51.2	45.0
3050	FB55	FB70	FB90	FB105
Regular Gauge	68.8	62.2	56.9	45.0

5+ String Bass Sets

Cat. No.	High C	1-G	2-D	3-A	4-E	5-B
M3050-5		FB45	FB65	FB85	FB105	FB126
Medium Gauge		41.5	50.7	51.2	45.0	34.4
M3050X-5		FB45	FB65	FB85	FB105	XLFB126
Medium Gauge		41.5	50.7	51.2	45.0	34.4

Short Scale *(Fits 30", 31" Scale)*

4-String Bass Sets

Cat. No.	1-G	2-D	3-A	4-E
3020	3021 (.045")	3022 (.060")	3023 (.075")	3024 (.095")
Light Gauge	37.2	33.3	27.4	24.3

Final Thoughts

This tension guide is just that; a guide. You're the expert at your own personal playing style and needs, so if something doesn't feel/sound right, you can change it. Music is a very organic art form, so while you can start with science, you perfect it by touch and feel.

If you're perfectly happy with playing a pre-packaged set of strings, *GREAT!*

If you're excited about putting together that balanced tension set, *GREAT!*

If you want to try a set with less/more tension than what you're used to, *GREAT!*

You're playing. You're learning. That's the important part. We'll provide the strings; you provide the inspiration.

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