

ADJUDICATOR APPLICATION GUIDELINE CHECKLIST

BAND CRITERIA

Candidate must satisfy both criteria.

I. Experience Competing at a High Level

"A" LEVEL

- 1. 10 years playing at the Grade 1 or 2 band level
- 2. 5 years competing successfully at the Grade 1 level or 5 years in a position of musical leadership of a successful grade 2 band.

"B" LEVEL

- 1. 10 years playing at the Grade 1, 2, or 3 band level
- 2. 5 years competing successfully at the Grade 1 or 2 level or 5 years in a position of musical leadership a successful grade 3 band.

Definition: In a Position of Musical Leadership

- To reach the "A" standard without grade 1 experience the individual must have been the pipe major, pipe sergeant, drum sergeant of a grade 2 band for 5 years.
- To reach the "B" standard without grade 1 or 2 experience the individual must have been the pipe major, pipe sergeant, drum sergeant of a grade 3 band for 5 years.
- In a position of musical leadership is also defined to be at least three of the following six items:
 - a) selecting the majority of pipe music in the band's competition repertoire;
 - b) assembling the competition medleys and sets including tune transitions;
 - c) instructing the band's pipe or drum corps in technique and phrasing;
 - d) selecting reeds for the band's pipe corps and establishing the foundation of the chanter and drone sound for the pipe corps;
 - e) selecting drums and heads for the band's drum corps and establishing the foundation of the sound for the drum corps (snare, tenor, bass);
 - f) on an at least equal basis with the band's pipe major, lead drummer, or ensemble leader in the pipe or drum corps, establishing the ensemble of the band.

II. Band Prize Winning Success

- To reach the "A" standard there must be a history of international competitive experience and success. Bands played in must have demonstrated a reasonable degree of prize-winning success in the respective Grade 1 or 2 competitions.
- To reach the "B" standard there must be a history of competitive experience and success. Bands played in must have demonstrated a reasonable degree of prize-winning success in the respective Grade 1, 2, or 3 competitions.

SOLO CRITERIA

Candidates must satisfy first two criteria. Criteria three and four may be considered to supplement qualification by the music board.

I. Experience

"A" LEVEL

1. 15 years competing in light music with 7 years at the professional level
2. Demonstrate a history of reasonable prize-winning success during professional career _____

"B" LEVEL

1. 15 years competing in light music with 7 years at the professional or Grade 1 level.
2. Demonstrate a history of reasonable prize-winning success during competitive career _____

"L" LEVEL

1. 15 years competing in light music with 7 years at the professional, Grade 1, or 2 levels
2. Demonstrate a history of reasonable prize-winning success during competitive career _____
3. Recommendation of the Branch President and/or music board with the approval of the music board. _____

II. Definitions/Principles:

High Level Competing Years

- Professional Caliber Player – a piper or drummer that is now, or in the past has been, appropriately graded in solo competitions as a professional or open level player (A piper or drummer who is capable of placing at a major WUSPBA professional or open level event, such as the United Scottish Society or Caledonian Club of San Francisco Gatherings. _____

Solo Prize Winning Success

- Reasonable amount of success in competitions – demonstrated ability to consistently place in competitions over the designated time period against other players who are appropriately graded. _____
- To reach the "A" standard there must be a history of international competitive experience and success. _____

III. Extensive Teaching Experience

There exists a demonstrated history of teaching experience showing a prolonged engagement with and production of high quality solo and/or band players. These players have competed successfully in professional, grade 1 or grade 2 solo events and/or competed successfully in grades 1, 2, or 3 band events.

IV. Extensive Adjudication Experience

There exists a demonstrated history of adjudication experience that shows a breadth of exposure over time, in multiple venues and with multiple piping and drumming associations.

1.6.1
LESSON 6

STAFF NOTATION (PART 2)

PITCH

As the nature of musical sound and melody became clear to early musicians, the "SCALE" (from the Latin "SCALA", meaning "LADDER") became established. The Greek mathematician Pythagoras showed how notes of different pitch, but of a precise placing in a particular order, could be achieved by repeatedly shortening, or "stopping" a plucked string.

The notes are named after the first seven letters of the alphabet from A to G, and repeated as required.

A scale is a particular succession of alphabetically named musical sounds or notes normally consisting of eight in number, so that beginning on 'A' (e.g. A; B; C; D; E; F; G; A), the first 'A' is called the 'TONIC' or keynote and the last note, also 'A', is called the 'OCTAVE' (from the Greek 'OKTO' meaning eight).

Each step of a scale is called a 'DEGREE' and each degree is separated by an 'INTERVAL'.

The position of each note is given meaning to the eye by the use of a ladder-like arrangement of lines and spaces, and the notes take their pitch name, 'A' to 'G' from their position on the ladder.

This ladder is "THE GREAT STAFF".

The GREAT STAFF is described as follows:-

It has eleven horizontal lines and ten intermediate spaces.

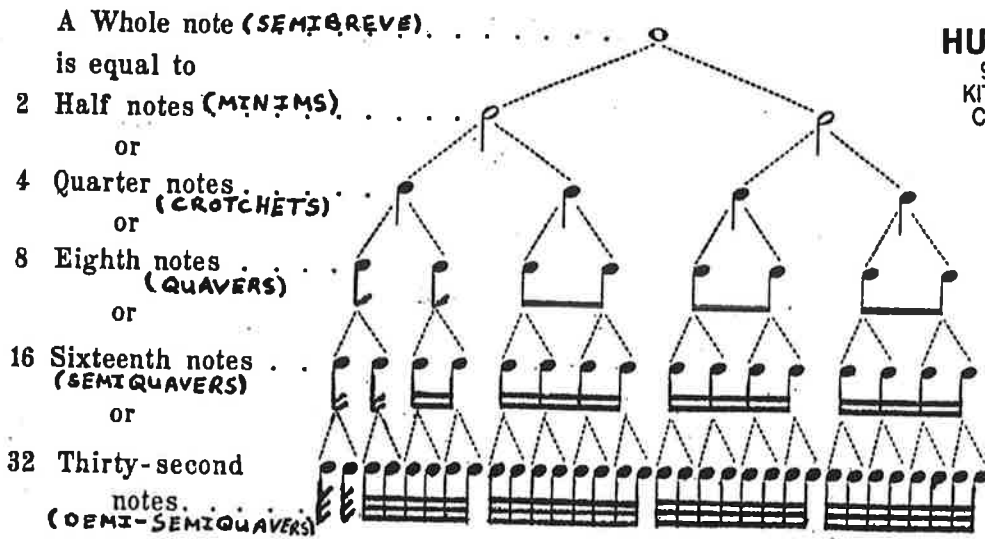
The Central Line is called 'MIDDLE C' but is not labelled as such when the Great Staff is used.

The note MIDDLE C is shown on a short line called a 'LEGER LINE'. A Leger Line is a short additional line which can be added above or below a stave to extend its range. Only one, above the stave, to accommodate High 'A' on the chanter is required when writing music for the Great Highland Bagpipe.

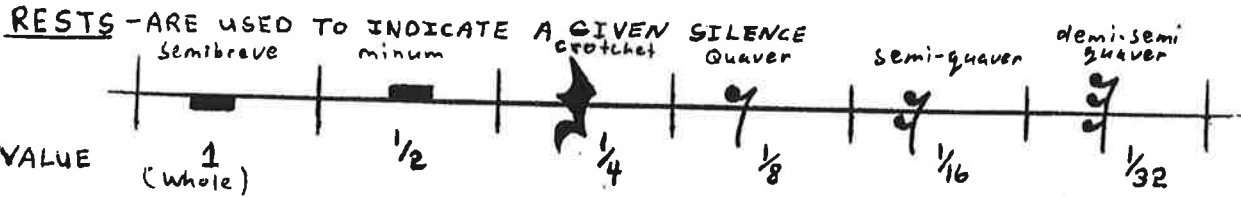
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DRUMMERS REFERENCE SHEET - HUGH CAMERON

THE VALUE OF NOTES



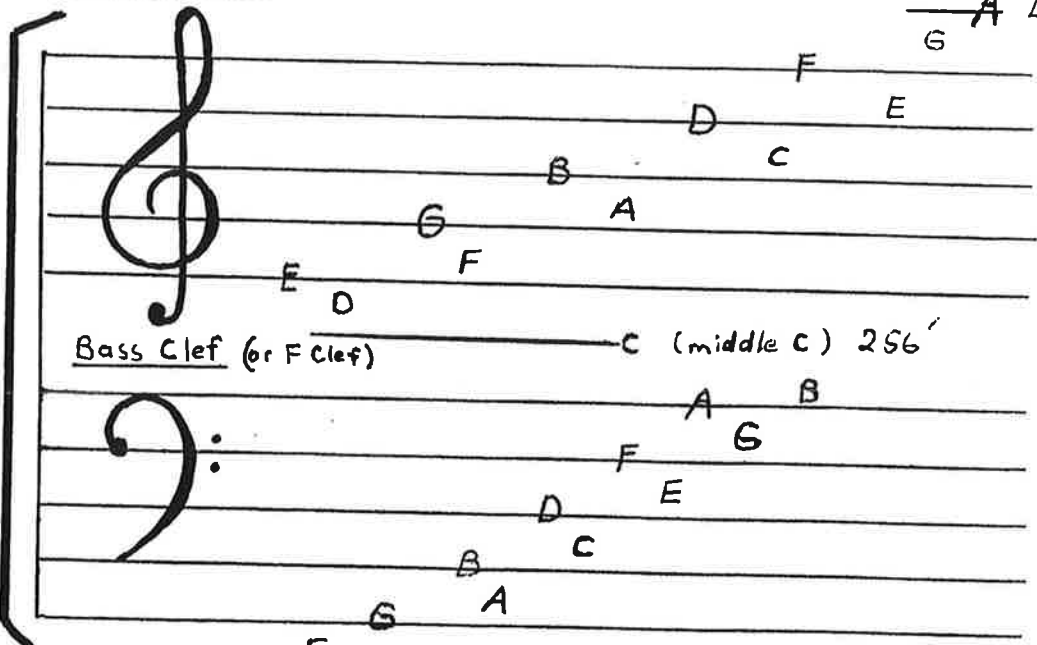
HUGH CAMERON
 90 Fairview Avenue
 KITCHENER, ONTARIO
 CANADA N2H 3G1
 (519) 576-6847



The Great Staff also called The Grand Staff

Treble Clef (or G clef)

A Leger Line
G



Brace →

Bass Clef (or F clef)

C (middle C) 256'

F Leger Line
E

1.6.2

STAFF NOTATION (PART 2) (CONT'D)

The Great Staff covers the full range or 'COMPASS' of the highest to lowest voices. The term 'VOICES' is used to describe instruments as well as human voices.

The voice ranges fall into roughly three groups.

Viz a viz:- The highest or 'TREBLE'
 The mid, or 'ALTO'
 The lowest, or 'BASS'

These are shown by using signs called 'CLEFS'.

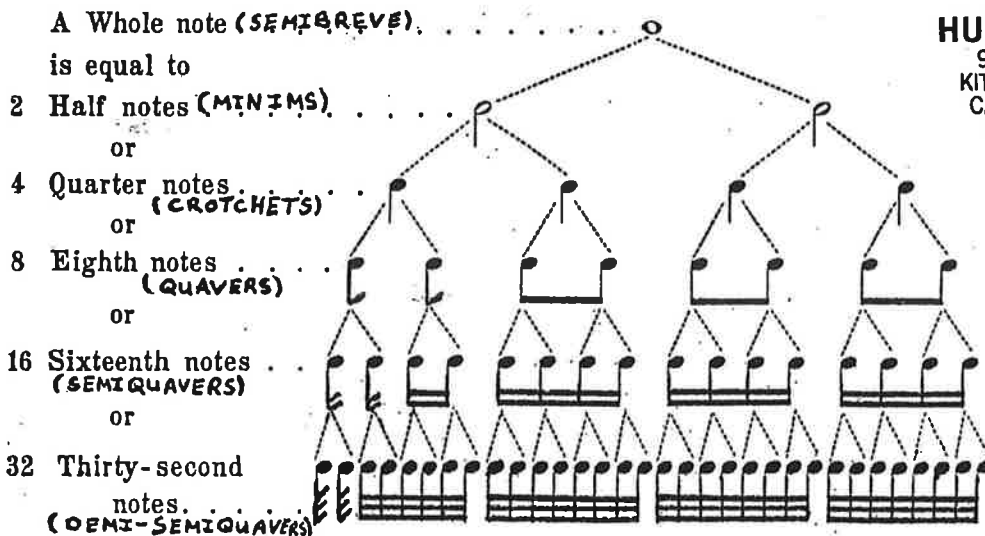
The Great Staff is normally only used for instruments such as the piano, organ or harp, which are capable of producing the full range of notes.

When the Great Staff is divided into two short staves, the middle line is omitted.

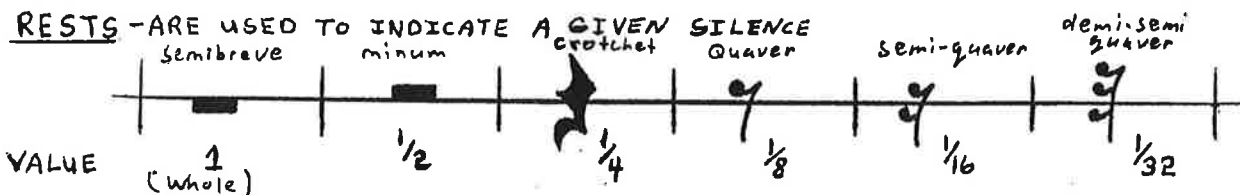
Instruments which have a short compass use the 'SHORT STAFF' consisting of 5 lines and 4 spaces. The lines and spaces of both the Great Staff and the Short Staff are named from the lowest upwards.

DRUMMERS REFERENCE SHEET - HUGH CAMERON

THE VALUE OF NOTES



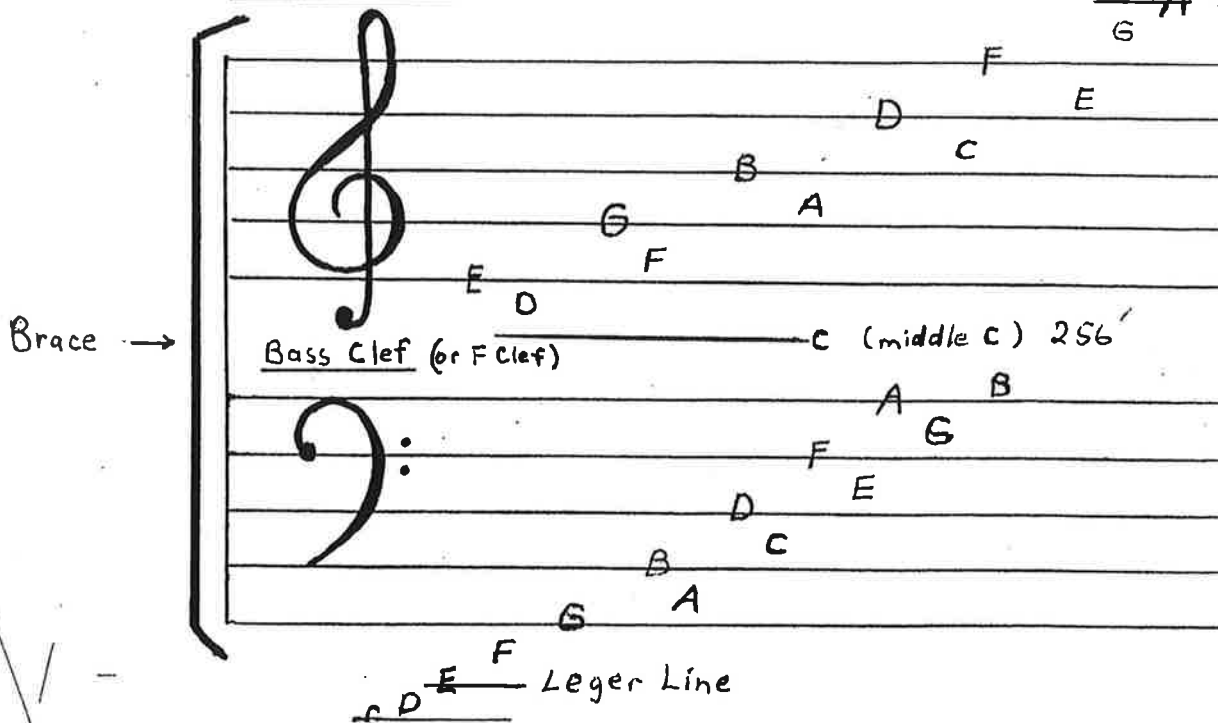
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LESSON 6

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/Cont'd...

Dynamic Marks of Expression

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fff = molto fortissimo - Extremely Loud (also called fortississimo)

ff = fortissimo - Very Loud

f = forte - Loud

mf = mezzo forte - Fairly Loud

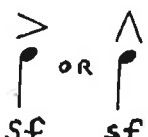
mp = mezzo piano - Fairly Soft

p = piano - Soft

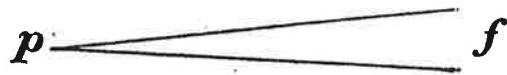
pp = pianissimo - Very Soft

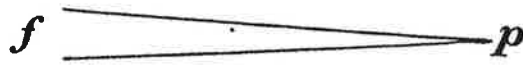
ppp = molto pianissimo - Extremely Soft (also called pianississimo)

Sforzando
(also sforzato-sfz)

 OR

means strong accent
OR
force

 **f** Crescendo (cresc.)
= getting louder or gradually louder

 **p** Diminuendo (Dimin.) or (Dim.)
OR Decrescendo (Decresc.)
= getting softer or gradually softer


Un poco piano - little softer

Un poco forte - little louder

molto - much or very


Tacet - be silent

Tempo Change

Fermata  over note or rest - to be held at pleasure by instrumentalist or conductor.

Ritardando (rit.) slowing down of speed. also Rallentando (rall.)

Accelerando (accel.) Gradually increasing speed.

Dal Segno sign  (D. S.) wherever the D. S. sign is used, it means that that portion of the composition is to be repeated.

Da Capo (D. C.) wherever D. C. is used, it means to go back to the very beginning of the composition and play it over again.

SIMPLE TIME SIGNATURES

THE ESSENTIAL CHARACTERISTIC OF SIMPLE TIME SIGNATURES IS THAT EACH BEAT IS DIVISIBLE BY TWO.

4-EXAMPLES-OF COMMONLY USED SIMPLE TIME SIGNATURES AND THEIR NATURAL ACCENTS (^ - DENOTES STRONG ACCENT)
 > - " MEDIUM "

-) $\frac{2}{4}$ - INDICATES 2 BEATS PER BAR
 $\frac{4}{4}$ - INDICATES THAT EACH BEAT HAS THE VALUE OF $\frac{1}{4}$

ie

BEAT - ① ② (STRONG WEAK)

-) $\frac{3}{4}$ - INDICATES 3 BEATS PER BAR
 $\frac{4}{4}$ - INDICATES THAT EACH BEAT HAS THE VALUE OF $\frac{1}{4}$

BEAT - ① ② ③ (STRONG - WEAK - WEAK)

-) $\frac{4}{4}$ - INDICATES 4 BEATS PER BAR
 $\frac{4}{4}$ - INDICATES THAT EACH BEAT HAS THE VALUE OF $\frac{1}{4}$

BEAT - ① ② ③ ④ (STRONG - WEAK - MEDIUM - WEAK)

-) $\frac{2}{2}$ - INDICATES 2 BEATS PER BAR
 $\frac{2}{2}$ - INDICATES THAT EACH BEAT HAS THE VALUE OF $\frac{1}{2}$

BEAT - ① ② (STRONG WEAK)

Introduction to Compound or Triplet Time Signatures

The essential characteristic of compound time signatures is that the beat note is a dotted note, and is divisible by three. This is why compound time is sometimes referred to as Triplet Time.

Three Examples of Compound Time Signatures

6/8 - Time Signature indicates that there are six eighth notes or their equivalent per bar of music. The top number, when divided by three, gives the number of beats per bar. (ie $6 \div 3 = 2$ beats per bar or double time)

Example A

Count: 1 a da 2 a da | 1 a da 2 a da | Strong weak | Strong weak
(Natural Accenting)

Note: If the first two bars above (A) were written in $2/4$ time signature, triplet markings would be required above each group of three notes.

ie $2/4$ | = Written in $6/8$ | |
(triplet markings are required) (no triplet markings are used)

9/8 - Time signature indicates that there are nine eighth notes per bar of music. The top number, when divided by three, gives the number of beats per bar. (ie $9 \div 3 = 3$ beats per bar or triple time)

Example B

Count: 1 a da 2 a da 3 a da | 1 a da 2 a da 3 a da | Strong weak weak | Strong weak weak
(Natural Accenting)

12/8 - Time Signature indicates that there are twelve eighth notes per bar of music. The top number, when divided by three, gives the number of beats per bar. (ie $12 \div 3 = 4$ beats per bar or quadruple time)

Example C

Count: 1 a da 2 a da 3 a da 4 a da | Strong weak medium weak
(Natural Accenting)

REPETITION SIGNS

HugL

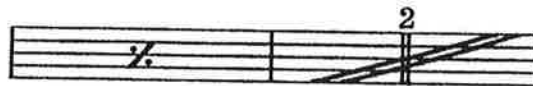
Legato or Tie. When a legato appears over a group of notes it means that the notes should be played connectedly.



Bis means repeat. Any measure or any number of measures marked Bis should be repeated.



RITORNELLO SIGNS



When a preceding measure is to be repeated this $\frac{2}{/}$ symbol is used.



When two preceding measures are to be repeated this $\frac{2}{||}$ symbol is used.



A section of music is sometimes played twice. The signs for showing where the repetition begins and ends are these:

||: No definite number of measures.

||: No definite number of measures.

These two signs are identical in meaning.

Sometimes the section that is to be played twice needs a different ending the second time. In that case the repetition marks are printed as follows:









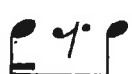

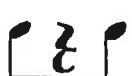

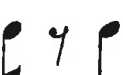


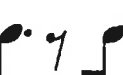




2.7.3

LESSON 7 - WORKSHEET (INCORPORATES LESSON 6)

EXERCISES - WRITTEN WORK

1. Each group shown below is equal to either a Simple or Compound note. Copy each group as given, draw the equivalent single note and state whether Simple or Compound.



a) 	b) 	c) 
d) 	e) 	f) 
g) 	h) 	i) 
j) 	k) 	l) 
m) 	n) 	o) 
p) 	q) 	r) 

2. Give the time signature for each of the following bars:-


a) 	b) 	c) 
d) 	e) 	f) 
g) 	h) 	i) 
j) 	k) 	l) 

1.4.2

LEGATO

Legato sounds are played so that each note connects smoothly with each successive note. This is sometimes shown in music as a curved line which is placed above  or below  a group of notes of different pitch. Since this is the only kind of sound able to be produced on the bagpipe, no curved line (also called a 'Slur') is shown on most bagpipe manuscripts.

STACCATO

Staccato sounds are the opposite of LEGATO sounds and these are played so that there is a definite period of silence between each note. This is shown as a dot above the note () The drum readily produces this type of sound and hence the Staccato sign is not used on drum manuscripts.

N.B. A roll on the snare drum consists of a rapid succession of sounds, which, when played correctly, will give the impression of a Legato sound.

THE R.S.P.B.A. DIAMOND JUBILEE - 1990

MARCH

Composer: Malcolm J. Brown-Scott
Drum Setting: Wilson Young

First system of musical notation for S.D., T.D., and B.D. staves. The S.D. staff includes dynamics such as *p*, *mf*, and *f*, along with articulation marks like accents and slurs. Fingerings (9, 7, 3, 7) and phrasing slurs are present. The T.D. and B.D. staves provide a rhythmic accompaniment.

Second system of musical notation for S.D., T.D., and B.D. staves. The S.D. staff includes dynamics such as *mf*, *p*, and *f*, along with articulation marks like accents and slurs. Fingerings (7, 3, 5, 5, 7) and phrasing slurs are present. The T.D. and B.D. staves provide a rhythmic accompaniment.

Third system of musical notation for S.D., T.D., and B.D. staves. A box labeled "SECOND TIME LAST PART" is positioned above the S.D. staff. The S.D. staff includes dynamics such as *mf*, *p*, and *f*, along with articulation marks like accents and slurs. Fingerings (9, 7, 3, 9) and phrasing slurs are present. The T.D. and B.D. staves provide a rhythmic accompaniment.

Fourth system of musical notation for S.D., T.D., and B.D. staves. Two boxes are positioned above the S.D. staff: "FIRST TIME ONLY - DRUMMERS" and "FIRST TIME ONLY - PIPERS". The S.D. staff includes dynamics such as *mf*, *f*, and *p*, along with articulation marks like accents and slurs. Fingerings (7, 3, 5, 5, 6, 7, 3, 5, 7, 9) and phrasing slurs are present. The T.D. and B.D. staves provide a rhythmic accompaniment.

Although this is not Elementary Standard, it is a good example of the "Full Score" for pipe bands.

1.10.1
LESSON 10

STAFF NOTATION (PART 6)

DURATION - LENGTHENING NOTES

The duration of notes may be increased by using the following:-

- (1) A Dot or Double Dots
- (2) The Tie or Bind
- (3) The Pause Sign

When using a Dot or Double Dot, or the Tie or Bind, the increase in length is precise, however, when the Pause Sign is used, the increase in duration is at the discretion of the performer, the conductor or the pipe major.

DOTTING

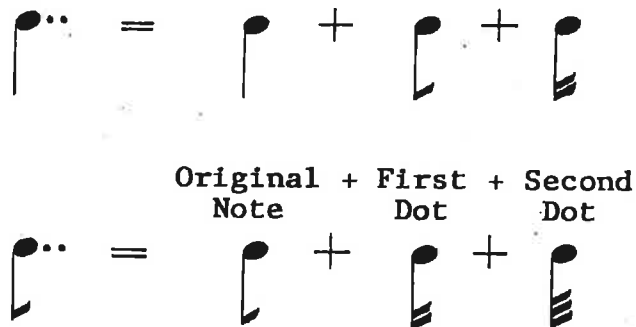
A dot, when placed after a note, increases its value by half its original value.

e.g.



In the case of a double dotted note (i.e. two dots), the second dot adds half of the value of the first dot.

e.g.



1:10.2

DOTTING (CONT'D)

Thus, a dotted note's duration is $1\frac{1}{2}$ times the value of the original note, also a double dotted note is $1\frac{3}{4}$ times the value of the original note.


TIE OR BIND

The Tie or Bind is a short curved line which is placed over two or more notes of the same pitch, the first note is sounded and held for the value of all the tied notes.

e.g.



PAUSE SIGN

The Pause Sign, known as the 'FERMATA' is a short arc enclosing a dot () and is placed over the note to be held. The sound is sustained at the performer's or conductor's discretion, therefore it has no exact duration.



PRACTICAL - INSTRUMENT TUNING (CONT'D)

BASS, TENOR AND SNARE DRUMS

The Music Board of the R.S.P.B.A. are indebted to the Pipe Band College of the Australian Federation of Pipe Band Associations and in particular to their Drumming Principal, Allan K. Chatto for allowing us to print the following extract from the comprehensive report on controlled tests regarding the tuning of bass, tenor and snare drums, carried out by Mr. G. Bassani and Mr. D. Murphy.

ANALYSIS OF FREQUENCY SPECTRUM TESTS ON

PIPE BAND BASS, TENOR AND SNARE DRUMS

Conducted by Greg Bassani (Lecturer) and David Murphy (Deputy Head), School of Electronic Engineering, Regency College of Technical and Further Education, South Australia, on 26th of January 1990.

AUTHOR: G. BASSANI

BACKGROUND

Pipe band drums, especially the snare drum, have become technically more advanced during recent years. Advancements have been made in all areas of drum construction; drum head materials have changed, the method of head tensioning has varied, shell materials may be timber-based or plastic, metalwork may be steel or high-tensile aluminium, and so on. During this time the author has been unable to obtain evidence of any serious scientific tests carried out on these instruments so as to demystify some of the current practises in drum design and tuning.

Questions which have been and are continuing to be asked about our drums are:-

Can the bass, tenor and snare drums be tuned to the pipes?

If so, exactly where do you set the pitch of the drums in relation to the bagpipes?

Is there a reliable electronic tuner on the market which will enable accurate bass and tenor drum tuning?

2.21.9

AIMS (CONT'D)

- * verify that a tenor drum will produce the same fundamental note irrespective of which head is struck and the relative tension of the heads,
- * measure the frequency spectrum of the snare drum without snares on, to note its frequency in relation to the bagpipes,
- * measure the frequency spectrum of the snare drum with the bottom snare on only, to observe the change in spectrum relative to the no-snare test,
- * measure the frequency spectrum of the snare drum with both snares on, to verify the existence of a complex spectrum of indefinite pitch.

EQUIPMENT

Quality instruments were used and comprised the following:-

Premier 18" (46cm) Tenor Drum, wooden hoops, plastic heads, no damper.

Premier 28" (71cm) Bass Drum, wooden hoops, plastic heads 3" (76mm) felt strip dampers on each head, about 6" (152mm) in from the rim at the furthest point.

Premier HTS-200 Snare Drum, Remo Falams white batter head, Premier plastic bottom head.

'Chatto' large bass beaters, 'Chatto' tenor sticks, 'Connell' snare sticks.

Korg auto-chromatic Digital Tuner DT-2.

Electret microphone with a frequency range extending well beyond the frequencies of interest in this test, at both the high and low end of the range.

Hewlett-Packard FFT Spectrum Analyser and Inkjet printer.

TESTS CONDUCTED

The tests were coded for the sake of simplicity and these codes along with a brief test description are given below.

/Cont'd...

TESTS CONDUCTED (CONT'D)

TEST SERIES NUMBER 2 - TENOR DRUM

In a similar manner to the bass drum, the tenor drum was tuned equal to the frequency of the bass drone of the bagpipes, namely 116 Hertz. The bottom head of the drum was set noticeably slacker than the top head so as to encourage vibration of the bottom head and hence projection of the sound off this head.

TEST 2A Tenor drum, struck with small stick (standard wool-covered tenor stick) in the centre of the top head with the bottom head towards the microphone.

TEST 2B Tenor drum, struck with small stick about 51mm (2") in from the rim of the top head with the bottom head towards the microphone.

TEST 2C Tenor drum, struck with small stick in the centre of the bottom head with the top head towards the microphone.

TEST SERIES NUMBER 3 - SNARE DRUM

The Korg tuner would not register the pitch of this drum, which the author suspects is due to the wide range of differing frequencies present and the inability of the tuner to discriminate between them.

The top head (REMO Falams) had been well played in and was 'acceptably' tight, while the bottom head (Premier plastic) was very tight and close to its breaking point.

TEST 3A Snare drum, both snares off, struck in the centre of the top head, bottom head to the microphone.

TEST 3B Snare drum, both snares off, struck in the centre of the bottom head, bottom head to the microphone.

TEST 3C Snare drum, both snares off, struck in the centre of the bottom head, top head to the microphone.

TEST 3D Snare drum, bottom snare 'on', top snare 'off', struck in the centre of the top head, bottom head to the microphone.

/Cont'd...

2.21.13

CONCLUSIONS (CONT'D)

7. The frequency of the tenor drum is determined by the tension of both heads. The author suggests setting the bottom head at a lesser tension to the top head. This will encourage movement of the bottom head, and hence, projection of the sound off this head.
8. The snare drum is an instrument of indefinite pitch and can not be tuned (in the strict sense). This is due to the complex frequency spectrum produced which shows many significant frequency components present.
9. For a "typically" set snare drum, changes in the bottom head tension will have more effect on the resulting pitch than changes in the top head tension. The author realises that there are other considerations to be made in the set-up of a snare drum. Since snare drummers are wanting a high pitch, the bottom head should be kept very tight (maximum tension) so that the risk of breaking a top head in the quest for this high pitch is minimised.

G. L. Bassani

May 1990

PRACTICAL - INSTRUMENT TUNING (CONT'D)

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Can the bass, tenor and snare drums be tuned to the pipes?

If so, exactly where do you set the pitch of the drums in relation to the bagpipes?

Is there a reliable electronic tuner on the market which will enable accurate bass and tenor drum tuning?

2.21.8

BACKGROUND (CONT'D)

Should both bass drum heads be of equal tension?

Should both tenor drum heads be of equal tension?

Where is the pitch of the snare drum in relation to the pipes?

Is the size of bass and tenor drum sticks important in determining the overall sound? Why?

Is the striking position on the bass and tenor drum important in determining the overall sound? Why?

Of course, a number of other questions are also asked, but the above represent the questions which the pipe band drumming fraternity seem most concerned about. Many of the questions can be answered without recourse to laboratory tests and the truth of the answers demonstrated to most people's satisfaction. However, being able to put some scientific basis to these explanations would further help to clarify the nature of the sound produced by the instruments, and put to rest many misconceptions that currently exist in the world of pipe band drumming.

AIMS

To produce frequency spectra of bass, tenor and snare drums under a variety of conditions and to analyse this information in order to:-

- * verify the accuracy of the KORG DT-2 electronic tuner,
- * verify the tuning of the bass drum at 1 octave below the bass drone of the bagpipes,
- * verify the tuning of the tenor drum at the frequency of the bass drone,
- * verify that small-head bass sticks produce larger overtones than large-head bass sticks,
- * verify that playing bass or tenor drums off-centre produces larger overtones than playing on-centre,
- * verify that a bass drum with different head tensions will produce the same note irrespective of which head is struck,
- * verify that a bass drum with different head tensions will give a different overtone pattern from each head even though the fundamental note will be the same,

2.21.9

AIMS (CONT'D)

- * verify that a tenor drum will produce the same fundamental note irrespective of which head is struck and the relative tension of the heads,
- * measure the frequency spectrum of the snare drum without snares on, to note its frequency in relation to the bagpipes,
- * measure the frequency spectrum of the snare drum with the bottom snare on only, to observe the change in spectrum relative to the no-snare test,
- * measure the frequency spectrum of the snare drum with both snares on, to verify the existence of a complex spectrum of indefinite pitch.

EQUIPMENT

Quality instruments were used and comprised the following:-

Premier 18" (46cm) Tenor Drum, wooden hoops, plastic heads, no damper.

Premier 28" (71cm) Bass Drum, wooden hoops, plastic heads 3" (76mm) felt strip dampers on each head, about 6" (152mm) in from the rim at the furthest point.

Premier HTS-200 Snare Drum, Remo Falams white batter head, Premier plastic bottom head.

'Chatto' large bass beaters, 'Chatto' tenor sticks, 'Connell' snare sticks.

Korg auto-chromatic Digital Tuner DT-2.

Electret microphone with a frequency range extending well beyond the frequencies of interest in this test, at both the high and low end of the range.

Hewlett-Packard FFT Spectrum Analyser and Inkjet printer.

TESTS CONDUCTED

The tests were coded for the sake of simplicity and these codes along with a brief test description are given below.

/Cont'd...

TESTS CONDUCTED (CONT'D)

The microphone was placed at right angles to the drum head in all tests and the closest drum head to the microphone was maintained at 1 metre distance. All drum strikes were direct with no glancing strokes used. All results were achieved from the average of 10 successive strikes of approximately equal weight, with the microphone active for only a very short space of time in order to minimise room affects.

TEST SERIES NUMBER 1 - BASS DRUM

For each test, the bass drum was set up using the KORG DT-2 electronic tuner so as to register A#, at one octave below the bass drone frequency. Typical LOW A on the bagpipe chanter is a frequency of 466 Hertz (formerly known as 'cycles per second'), this would place the tenor drones at 233 Hertz, bass drone at about 116 Hertz and the bass drum at 58 Hertz.

- TEST 1A Bass drum, heads evenly tensioned, struck with large stick in the centre of the head furthest from the microphone.
- TEST 1B Bass drum, heads evenly tensioned, struck with large stick approximately 76mm (3") in from the rim away from the damper, on the head furthest from the microphone.
- TEST 1C Bass drum, heads evenly tensioned, struck with small stick in the centre of the head furthest from the microphone.
- TEST 1D Bass drum, heads evenly tensioned, struck with small stick approximately 76mm (3") in from the rim away from the damper, on the head furthest from the microphone.
- TEST 1E Bass drum, heads differently tensioned by 180 degrees on each screw on one side of the drum compared to the other, struck with large stick in the centre of the head closest to the microphone, SLACK head struck.
- TEST 1F Bass drum, heads differently tensioned by 180 degrees on each screw on one side of the drum compared to the other, struck with large stick in the centre of the head closest to the microphone, TIGHT head struck.

TESTS CONDUCTED (CONT'D)TEST SERIES NUMBER 2 - TENOR DRUM

In a similar manner to the bass drum, the tenor drum was tuned equal to the frequency of the bass drone of the bagpipes, namely 116 Hertz. The bottom head of the drum was set noticeably slacker than the top head so as to encourage vibration of the bottom head and hence projection of the sound off this head.

TEST 2A Tenor drum, struck with small stick (standard wool-covered tenor stick) in the centre of the top head with the bottom head towards the microphone.

TEST 2B Tenor drum, struck with small stick about 51mm (2") in from the rim of the top head with the bottom head towards the microphone.

TEST 2C Tenor drum, struck with small stick in the centre of the bottom head with the top head towards the microphone.

TEST SERIES NUMBER 3 - SNARE DRUM

The Korg tuner would not register the pitch of this drum, which the author suspects is due to the wide range of differing frequencies present and the inability of the tuner to discriminate between them.

The top head (REMO Falams) had been well played in and was 'acceptably' tight, while the bottom head (Premier plastic) was very tight and close to its breaking point.

TEST 3A Snare drum, both snares off, struck in the centre of the top head, bottom head to the microphone.

TEST 3B Snare drum, both snares off, struck in the centre of the bottom head, bottom head to the microphone.

TEST 3C Snare drum, both snares off, struck in the centre of the bottom head, top head to the microphone.

TEST 3D Snare drum, bottom snare 'on', top snare 'off', struck in the centre of the top head, bottom head to the microphone.

/Cont'd...

2.21.12

TEST SERIES NUMBER 3 - SNARE DRUM (CONT'D)

TEST 3E Snare drum, bottom snare and top snare 'on', struck in the centre of the top head, bottom head to the microphone.

CONCLUSIONS

1. The accuracy of the Korg DT-2 auto-chromatic tuner in setting the frequency of the bass and tenor drums has been verified.
2. The bass drum tuning range is in the octave below the bass drone of the pipes. In fact, tuning the bass drum to exactly one octave below the bass drone will produce perfect harmony with correctly set bagpipes.
3. The tenor drum tuning range is in the octave of the bass drone of the pipes (that is, the octave below the tenor drone). Tuning the tenor drum to the same frequency as the bass drone will produce perfect harmony with correctly set bagpipes.
4. Larger bass drum sticks suppress the overtones of the bass drum. These overtones are not harmonious with the fundamental bass drum note and are undesirable. The limit of the size of stick is determined by a compromise between the need to suppress the overtones and the need to have clarity of execution with the drumming performance. Ignoring this compromise may lead to a rich and harmonious bass drum "rumble".
5. Playing bass and tenor drums off-centre exaggerates the discordant overtones.
6. Bass drums with differently tensioned heads can only produce a fundamental note, no matter which head is struck. Overtone differences from each head will be perceived as a pitch difference but in reality it is the timbre or quality of sound that has altered, not the fundamental note. However, it is recommended that the heads be equally tensioned so that a consistency of sound is obtained.

/Cont'd...

CONCLUSIONS (CONT'D)

7. The frequency of the tenor drum is determined by the tension of both heads. The author suggests setting the bottom head at a lesser tension to the top head. This will encourage movement of the bottom head, and hence, projection of the sound off this head.
8. The snare drum is an instrument of indefinite pitch and can not be tuned (in the strict sense). This is due to the complex frequency spectrum produced which shows many significant frequency components present.
9. For a "typically" set snare drum, changes in the bottom head tension will have more effect on the resulting pitch than changes in the top head tension. The author realises that there are other considerations to be made in the set-up of a snare drum. Since snare drummers are wanting a high pitch, the bottom head should be kept very tight (maximum tension) so that the risk of breaking a top head in the quest for this high pitch is minimised.

G. L. Bassani

May 1990

3.12.1

LESSON 12

THE CONSTITUENTS OF MUSIC

INTRODUCTION

The composition of music, poetry, sculpture, painting etc., is a product of the imagination. Like other art forms, music is difficult to quantify and its ultimate worth lies with its appeal to the listener. The success, achievement or perceived ability of the artist can vary considerably.

In the field of music, composers whose general work is considered of lesser standing than others, may well be held in high esteem for a single outstanding composition.

Regardless of the complexity or simplicity of composition, music has three common elements or constituents.

These are: **Rhythm**

Melody

Harmony

THE CONSTITUENTS OF MUSIC (PART 1)RHYTHM

Rhythm is the regular recurrence of strong and weak accents arising from the division of music into regular metrical portions.

In addition to the rhythms discussed in Structured Learning Books 1 and 2, other rhythms exist and include the following:-

- | | | |
|------------------|---|---|
| Polyrhythm | - | When three or more different rhythms are incorporated simultaneously. |
| Cross Rhythm | - | When two different rhythms are incorporated simultaneously. |
| Hemiola | - | When simple triple time and compound duple time are incorporated simultaneously.. |
| Alternating Time | - | Constant changing of rhythm. |
| Variable Time | - | Periodic changes of rhythm. |

THE CONSTITUENTS OF MUSIC (PART 2)

MELODY (PART 1)

Melody is an orderly succession of single different sounds progressing horizontally, achieving a distinct musical shape.

When melody is examined, a variety of forms may be identified.

Among the types of musical forms produced by the combination of various scales are the following:-

- Diatonic Music** - Major and minor scales.
- Chromatic (Atonal) Music** - Chromatic and whole-tone scales.
- Pentatonic Music** - Five note scales.
- Modal Music** - Variations of the diatonic scales.
- Microtonal Music** - Intervals of less than a semitone.
(Generally features in music typical of Eastern culture).

3.12.14

THE CONSTITUENTS OF MUSIC (PART 3)

HARMONY

Harmony is the simultaneous combination of two or more sounds progressing vertically.

Its importance and complexity are such that it may be treated as a separate subject in its own right.

Monophonic music is the sounding of a melody by a single voice or a number of voices in unison.

Homophonic music is the sounding of a melody accompanied by one or more harmonising voices.

Examples of this are organum, known as **two part harmony**, or the **seconds** played in piping. In organum, the first part (the melody or principal voice) is termed the vox-principalis and the second part (the harmony or organ voice) is termed the vox-organalis.

Music evolved from two part to three part harmony by combining the root, third and fifth intervals. This is known as the **triad** or **common chord**.

The triad consists of seven semitones in two groups. The semitones from root to third determine the major or minor interval and the semitones third to fifth which, if reduced or increased by the use of accidentals, will make the triad diminished or augmented.

The Quest For Perfect Tone

MORE ON TUNING THE TENOR

■ by Jon Quigg

IN THE PROCESS OF GETTING THE ARTICLE by Dave Grebos ready for printing in the last issue of *the VOICE*, I consulted several other drummers to get a sense of just what kind of response his ideas might bring about. The following e-mailed responses turned out to be an education in themselves. Primarily, they show that while exact science can be applied to the study of midsection percussion, and that some of the prevailing tuning wisdom is pretty well mapped out, artistic or personal preference is still what governs how people will approach this discipline. Additionally, I was pleasantly surprised that each of the respondents showed a willingness to allow for other opinions and notions on how to best tune midsection drums, in spite of personally held beliefs.

GREG BASSANI

Greg Bassani, the Principal of Drumming for the Australian Pipe Band College, who did the original studies that current tuning trends are based on, contributed the following:

I would be keen to support this discussion. My original lab tests of drums back in the early 90s were prompted by the incorrect assertions that were being put forward with respect to the sound of these drums. Unfortunately, much of this incorrect information is still doing the rounds today. I had a ball with my very early tests as I used a bass drum, strobe light and sound source to visually examine the "modes of vibration" of the drum-head. I could see the first three or so, but after that, the amplitude of head movement was fairly slight and it was too hard to see the movement.

With the acquisition of a low frequency

"Dynamic Signal Analyzer" in my engineering school back in 1990, I was able take these tests much further. The RSPBA *Intermediate Tutor Book* has a synopsis of these tests. Unfortunately, the RSPBA printed a lot of inappropriate sections of the report. Had I known that they were going to print anything, I would have written a more easily-readable version (in plain English). The tests supported my hypotheses and the rest is history. I was aware of a lot of flack at the time about my "overly-scientific" approach but that's the nature of the beast.

Armed with the knowledge of the tuning capabilities of these instruments and the factors that affect tuning, it became a matter of individuals deciding how they would like to apply this information. There have always been people who could accurately assess the tuning of instruments without any electronic tuners, but I think they were in the vast minority (a reference to those gifted with "perfect pitch"). Fortunately, the Korg fast-response tuners hit the market at about the same time and this gave us all the tools to apply the knowledge. The relatively short duration note of the drums is a variable in our ability to accurately assess their pitch and the electronic tuners gave us all the power to do this. For me, it was an educative process in that the tuner helped to educate me in what to listen for. I think if I had developed skills with other tuned instruments (such

MIDSECTION

as piano) then I would have found this all a whole lot easier.

I respect and agree with many of the views in Dave's article. I agree (with his contention) that there are risks of discord associated with other pitched drums, such as the concerns a tympanist would have to possess. Picking up any of the chanter notes in the mid-section tuning will obviously be appropriate within the context of the pipes, since all chanter notes co-exist sympathetically with the drones (at least, to our ears). Using variously pitched drums that are tuned "correctly" will sound acceptable against the drones (again, to more or less a degree), but, as Dave suggests, can be placed in conflict against the chanter unless used at appropriate times, depending on the key of the tune.

Personally, I tune my bass and tenors to B₂ as I believe that this is the most fundamental connection that the bass section can make to the band. It is, in essence, reinforcing the drones and has minimal potential for dissonance since the drones are pervasive and have a constant penetration throughout the band performance. For me, however, an argument against B₂ tuning is tantamount to an argument against the inclusion of drones in bagpipes. Still, Dave has made some excellent points and people have to decide where to go from here. I would like to congratulate him on his well-written and thoughtful work.



VINCE BUSCEMI

Vince Buscemi (no relation to Steve), brings ten years of performing, arranging and teaching experience in marching percussion to the discussion. His tuning of a standard "battery" section, as their midsections are referred to, involves managing the notes of upwards of 5 tonal basses and 3 multiples players ("quints"—5 tenors per player) for a given performance. Then there's the marimbas, and...you get the point.

My initial thought is why associate the tenor tuning to the pipes with a string bass to a jazz combo when you wouldn't do the same to the actual drummer in a jazz combo. I feel the tenor drums should have pitches tuned in thirds for a more melodic sound within the drum section. However they should not be considered part of the melodic harmony from the pipe section. That's like telling Buddy Rich his drums are out of tune with the rest of the band. A drummer tunes the tenors to the pitch they prefer but should not try to make each drum a specific note to "fit in" with the band. I realize the school of thought now is to tune to specific notes of the pipes B \flat chord but Dave brings up a good point that other tunes not in that key would make the tenors sound out of tune.

My second thought concerns his reference to judge's comments about "a harsh drum sound" or "overpowering attacks." Those sorts of comments would seem to imply technique issues more than tuning. Any percussion instrument that is overplayed will produce a harsh sound—a problem solved with proper sticking technique—or even the type of stick being used. Just my two cents.

DOUG STRONACH

Doug Stronach, current D/S for Peel Regional Police in Ontario, brings over 20 years of experience to the discussion—performing, teaching, arranging, composing, writing books, recording and producing pipe bands, jazz and orchestral percussion. And he's got a heck of a singing voice...

Dave's got some interesting comments and they are all very valid. Pipe tunes can be in many different keys with the most common (especially for older tunes) probably being E \flat , and its relative minor (C minor) over the more obvious choice of B \flat major. If you think of the bagpipe in E \flat (D on the pipes), then E \flat becomes the "center" note of the scale and the drones tuned to B \flat become the fifth of the scale (as opposed to thinking that the drones are always the tonic—not so as your man rightly pointed out). The basic harmony

produced by the root and fifth combination is very common for older instruments and is for example the harmony for older style music such as the Gregorian Chants. It would make sense given the age of bagpipes that they may have originally been created with this type of harmony in mind.

Present thinking in pipe bands states that the tenor drums should be tuned to notes that form chords within the bagpipe scale. This is similar to the way a timpani player would tune his drums to work for the key of the piece he is about to play. However, timpani players can tune their drums instantly (sometimes in the middle of a piece) to follow key changes in the music. Tuning gauges are built into the instrument and a foot pedal below that tightens and loosens all tuning pegs at once, enabling timpani players to tune precisely and quickly. Because tenor drums cannot be tuned on the fly, it is sensible to come up with the conclusion that the notes common to most scales played by the bagpipe should be used by the tenor drummers and other notes that are specific to certain keys are to be avoided.

However, there is another way of thinking about this and one that is my own preference on the subject. If you can subscribe to the thinking that you don't need to create chords with the tenor drums but simply moving pitches to add interest to the rhythms played, then all of this theory on scales and chords becomes superfluous. Instead of thinking of the tenor drums as

timpani drums in an orchestra, think of them as the toms of a drum set, all tuned perhaps a fourth apart for separation and in tune with themselves but not the rest of the band. You don't see drum set players changing their tom tuning as the band changes to a new song and a new key, and you don't see people cringing in the audience because the drum set player's toms are tuned closest to C and the band is playing a tune in B major. The fact is that drums are described by most music scholars as instruments of indefinite pitch. This is how I have come to think of tenor and bass tuning. Ultimately for me I don't hear any distinguishable harmony or melody (in tune or out) coming from the mid-section. Just a feeling of movement, hopefully coinciding with the rhythms being played by the rest of the band. It's music, not science.

Good stuff to get into...well done.

BACK TO JON

To those of us "old schoolers" in the audience, there's a lot to chew on in this tuning discussion. To those willing to experiment, there is the satisfaction of knowledge gained and hopefully, enjoyable music rendered. Let the pipers and snare drummers follow their trends toward higher and higher pitch—modern pipe band midsections, more than ever, are providing the tonal soul of a pipe band. And, as such, provide more than their share to any band's ensemble sound. ■

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Another Step Closer to Bridging the Gap

TUNING THE MIDSECTION

■ by Tyler Fry

MIDSECTION

WITH LIBERAL PROGRESSIVE movements never being more predominant in the field, we are able to see the expanding importance of the midsection within the pipe band ensemble. To discuss the aspect of tuning within the pipe band midsection, we must first understand (as we know with our three-droned friends at the front of the band) that in music, tuning is simply a given. A player would not attempt to show up to a band or orchestra unless his instrument was in tune with itself. The problem has been that historically, the midsection did not have the same function as it does today, and often tuning within the section was paradoxically a "function of little function."

If we look at the role of the midsection historically as the primary timekeeper, we know that time is the foundation behind all rhythmic structures and variations found in the melody and the snare drum accompaniment. In a sense, the playing of time by the midsection was one means of "bridging" the two sections together, by providing a solid foundation to everything else overlying it.

In today's pipe band ensemble, this aspect of "bridging" has taken on an additional dimension through the playing of rhythmic structures that ideally highlight key areas within both the melody and snare drum accompaniment. In fact, the integration of the visual component (or flourishes) within the ensemble should ideally take on the same function by creating a visual representation of the melody and snare drum accompaniment.

Adding "rhythmic colour" to the ensemble is now done through the use of more than just the traditional bass and tenor voices—possibly through the addition of baritone, alto, and soprano drums. Prior to performing any aspect of "rhythmic accentuation" it is essential to understand how to tune our instruments to allow the latter roles of the midsection to bring the

gap that much closer together.

I am personally as obsessive about having my drum in tune with itself and the rest of the ensemble as a bagpiper is in relation to his section! The wonderful thing is that it is not rocket science—anyone is fully capable of tuning a drum in relation to the bagpipe, assuming that the proper resources are in place. There are basic introductory processes associated with getting the midsection "in tune with itself" and then "in tune with the entire ensemble."

WHERE DO WE BEGIN?

Let's begin by understanding that bass and tenor drums can be tuned in relationship to the bagpipe. We are able to achieve absolute pitches from our instruments by having them in tune with themselves. But what does this mean?

I am indebted to the scientific studies performed by Greg Bassani of the Australian Pipe Band College (1990) who has provided objective evidence that bass and tenor drums are capable of producing identifiable notes. I will use the latter study as factual support to the methodology we use in the 78th Frasers. Tuning bass and tenor drums to clear, identifiable pitches allows us to tune harmonically to the bagpipe using various diameters of drums, and therefore provides greater depth to the pipe band ensemble.

Historically, pipe band bass and tenor drums were tuned simply as a means of adding colour to the overall ensemble; to tune for colour is to tune to no particular pitch, note or frequency. Conversely, when something is tuned in relationship to something else it is being tuned for function. Within a pipe band, functional tuning makes the most sense by allowing the drums to blend in relation to the bagpipe. Generally, when an object is in tune with everything else around it, it will be most beneficial to the depth of ensemble and therefore provide one step closer to bridging the gap between sections. Imagine having the midsection highlight a rhyth-

mic pattern in the snare drumming while using voicing arrangements that create harmonics over top of the melody—now that's ensemble!

IN TUNE WITH THEMSELVES

In order for the drums to produce an identifiable note, the drums must first be in tune with themselves—or more simply have both heads of equal tension. This means that each zone (or the area where each bolt is tightened) is tuned the same. When each tuning rod on both top and bottom drumheads is at the same tension, the fundamental pitch or note of the drum becomes the strongest and therefore definable by any chromatic tuner and the human ear. Tuning each zone by ear can be a tedious task; therefore, a Timpanic Measuring Device (TMD) is highly recommended. The device can be easily purchased from a local drum or music shop. Brands include Hosbilt® TMD (CA), Tama® Tension Watch® (US) and Drum Dial® (UK). These show an accurate representation of the tension in each zone, and they are also many times more efficient than the traditional "tap and listen" method—assuming that there is not anything obstructing the level of deflection under the head (such as strips of felt/dampening, or uneven bearing edges). Be wary of devices that measure the torque in each zone. Any unmatched lubricity in each of the threaded counterparts (or lugs) and head fibers will also provide an inaccurate representation of the tension in each zone.

A TMD can readily match these zones of tension identically by measuring the drumhead deflection in each zone. The number read by the device means absolutely nothing—it is simply a measure of the tension in each region of the drum. The goal is simply to have them all the same.

Once this is done on both heads, the drum is then in tune with itself and at this stage, it will create a definable pitch when struck. Almost any chromatic electronic

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tuner can read this pitch—I personally recommend the Korg® DT-3 as an affordable device that readily does the trick. If the tuner cannot pick up the note (in other words, numerous random or inconsistent notes appear on the screen of the tuner), chances are there is more than one note being created at the same time from the drum. Your drum is therefore not in tune with itself. It will then be necessary to recheck each zone for equal tension.

HOW TO TUNE WITH OTHERS

At one time an A on the bagpipe was an A in concert pitch, or the note you would hit on a piano; however, that is clearly not the case today. An A on the bagpipe today is closer to a B_b. It is almost impossible to define the bagpipe within any particular key—it is not a perfect B_b instrument like the trumpet—but to simplify the content of this article, let's assume that the bagpipe is a perfect B_b instrument. This makes our role as functional tuners in the mid-section initially that much easier. A B_b on the piano we will assume matches the A on the bagpipe. (See figure 1.)

When bagpipe tunes are said to be in a major key, then they are usually based harmonically on the chord of A, C and E in bagpipe pitch. Since a large majority of pipe band music is written in this key, it makes sense to use these three notes when tuning the tenor drums in relation to the bagpipe. We will use the latter three notes as the foundation behind our tuning process. They relate in concert pitch to B_b, D, and F in concert pitch, which will be important to know later. These notes can also be classified as the root, 3rd and 5th respectively. (See figure 2.)

Using basic musical knowledge, we know that these three notes when played on their own or together, sound wonderful. Anyone who knows the musical theme to Star Wars can appreciate the strong relationship among these notes—particularly the strong relationship between the root (B_b) and the 5th (F) in the first bar of the composition. We can imagine the impact of having not only strong harmonics (notes that work well together) within the mid-section, but harmonics that also relate to the bagpipe. We can already envision the gap between sections becoming smaller!

A standard 28" bass drum is most easily tuned to the B_b (an octave below the bass drone contrary to popular belief).

A Can of Worms?

ALTERNATIVE THINKING ON TUNING TENOR DRUMS

■ by David Grebos

Pipe band ensemble and the related evolution of the midsection arts are ongoing topics of hot debate around the world. The recently published articles by Tyler Fry, citing the impressive work done by Greg Bassani of the Australian Pipe Band College, shed some much-needed light on the midsection, and should be beneficial to many bands. However, there may well be some additional theory-based ways to skin this particular cat. With a wealth of percussion education and experience, Dave Grebos has recently been experimenting with the use of "multiples" (two or more tenor drums rigged for one player) in a pipe band setting. The Carnegie Mellon University Pipe Band has competed at a number of events in 2002 and 2003 with Dave on tri-toms. Non-traditional? Yes. To a fault? Depends on whom you're talking to. (Hardcore flourishers, you may want to attempt this article from the prone position, cold compress applied to forehead.) The use of "multiples" in a pipe band didn't start with Dave, but it's safe to say that few, if any, have taken the theory-based approach to it that he has.

—JON QUIGG

AFTER HAVING BEEN A SIDE DRUMMER for more years than I care to admit, I recently moved to the midsection of the CMU drum corps. In the last two years, I've attended numerous clinics and workshops devoted to tenor drumming, viewed instructional videos on the subject and read articles written by respected players. It seems to me that one area of continual angst amongst rhythm tenor players is that of tuning—specifically, tuning drums to an "identifiable pitch." The article by Tyler Fry in the Spring 2003 issue of *the VOICE* articulates the current collective thinking on midsection tuning, so it's from there that I'll attempt to make my case, with specific regard to tenor drums. My motivation in contributing this article is toward improving midsection musicality and not to undercut anyone else's position or thoughts on the matter.

PREVAILING TRENDS

The use of "identifiable pitch" in pipe band midsection drum tuning is a growing phenomenon that I suggest has opened a can of worms that we (players, arrangers and judges) are not tackling as effectively as we might. Historically, drums have been considered instruments of "indefinite pitch," leaving pipe band drummers free to pass up the melodic tuning aspect of music theory...until recently. The advent of the use of multiple "voices" in the mid-

section has changed the rules to the degree that the drums producing those voices are now considered to be instruments of "identifiable pitch," and specific notes are expected from each drum. Attempts to keep up with these trends, coupled with vague score sheet comments such as, "Drums sound flat," or "out-of-tune" have sent players scurrying to find out more about tone and tuning—to improve their band's musicality and to become more competitively effective. Noble as that quest is, I feel that this tuning issue is more complicated than the aforementioned collective thinking suggests.

My admittedly limited research has identified the notes B₁, F, and D as generally recommended pitches for multiple tenor drums. The rationale for selecting these notes seems to be based on the tuning of the bagpipe as a B₁ instrument, with its drones and quasi-diatonic scale being essentially the key of B₁, and here is where the flaw creeps in. The Fry article mentions, "Since a large majority of pipe band music is written in this key (B₁), it makes sense to use these three notes when tuning the tenor drums in relation to the bagpipe." This would seem to me to be an over-generalization. In fact, it's not hard to find any number of well-known tunes that are in keys other than B₁. What is being overlooked here is the fact that the chordal patterns of the tunes, and *not* just the key of the bagpipe, should dictate tuning. Once

the drums were coaxed into producing an "identifiable pitch," they became part of the harmonic accompaniment as well as the rhythmic accompaniment—much like either kettle drums in an orchestra or a string bass in a combo. The notes they now play have to be part of the harmonic structure at any point in the tune to truly be "in tune." Pipe music is dynamic, not static—the melodies include a changing harmonic structure that must be considered. Even the most basic tune has an inherent harmony pattern that we can all recognize. It may be only two or three different chords, but the harmonies exist and are the basis for any additional notes played along with the melody, whether it's the "2nds" of pipers or the "identifiable pitches" of drummers.

ALTERNATIVE THINKING

In selecting pitches for the tenors to use throughout, it is necessary to analyze the harmonies of the tunes and carefully coordinate the written parts with those changing harmonies. Pipe tunes can employ harmonic patterns based on F, E₇, A₇, G₇, and C₇ as well as B₇. Playing a drum tuned to F or D in the middle of E₇ or A₇ harmonic passages (which occur frequently, as in the second part of "Road to the Isles") will definitely sound out-of-tune because those notes are, for lack of a better word, *wrong!* This, I believe, is one of the more common reasons for vague score sheet comments like "out-of-tune." The drums may well be perfectly tuned, but by using a tenor voice to play against a tonally incompatible passage, a detectable dissonance will occur. Tenor parts that are scored generically (with rhythm based merely on what sounds "cool" from a drumming standpoint) will occasionally blend with the melodies...but purely by accident. ("A stopped clock...") "Robin Adair" and "Rowan Tree," two simple tunes frequently played together, are in different keys and require very different parts. "All the Blue Bonnets Are Over the Border" and "A Hundred Pipers" both change key halfway



through. Arrangers of tenor drum parts seldom, if ever, take any of this into consideration when constructing scores, but to take the refinement of our activity to the next level, I suggest, they must!

To fairly and accurately critique midsections, I believe judges should also have an understanding of these concepts. Comments such as, "Timbre of drum harsh," "Weight of stroke affecting pitch," "This passage of score not harmonically correct," or "Top drum not tuned to correct pitch," clearly identify tone issues in need of attention. The language used on score sheets should employ specific terminology and should preferably be universal to keep the competition process as valid and clear as possible.

THE BIG BOYS

By this point you may be wondering if I'm saying that most of the highest profile bands in the world might be doing something fundamentally wrong with their tuning set-ups. Well...it's quite possible, in a strict musical sense, if they use B_b-D-F "identifiable pitch" tuning.

There are a lot of variables at work when experiencing world-class pipe band performances—variables that might obscure specific aspects of tone. Having the ability to select and process specific frequencies out of a wall of (what is otherwise very impressive) sound is not a skill that comes easily. You're more apt to be focusing on the many other things the bands are doing so well, not to mention the volume level and complexity of the scoring, which can also mask tonal inaccuracies.

Add to that the methods used to baffle tenor drums, the softness of the mallet heads, and possible inconsistency of playing weight during flourishing passages, and detecting whether a tenor drum is part of an accurate tonal blend with the chanters is a tall order, indeed! However, lower grade bands, with fewer total players and possibly less-skilled midsection players, will reveal their tuning more dramatically and must be very careful.

RECIPES FOR PROGRESS

To get started, I think it would benefit midsection players to consider themselves as the "string bass" section of the band. A minimum of three drums would be advisable—tuned to F, B_b, and E_b (rather than D). This would provide the root notes of

at least three of the four basic chords (I, II, IV & V) from the two most common keys (B_b & E_b). However, arrangers beware!! The tuning selected and the rhythms written *must* be "tonally fitted" to each pipe tune. The downside here is that you'll need to be prepared to have players laying out for long periods, due to the sometimes repetitive sequence of keys and harmonies of a particular set of tunes.

And now, the full-blown version of this thinking: Though the use of "multiples" isn't the thrust here, I would go so far as to suggest that two players with a set of three drums each (tuned to G-B_b-E_b and F-A_b-C, and aiming for the truer note/tone quality of pipe band style tenors than is generally heard from traditional American tritoms) could effectively cover the harmonic possibilities throughout a band's repertoire, while minimizing the inactive player anomaly. It's not hard to imagine that scoring for this sort of player configuration could result in quite a complicated give-and-take of rhythm patterns and player interdependency, and perhaps more than the usual care would have to go into aiming for tasteful contributions.

Even maintaining the relative restraint that pipe bands are known for, (vs., say, the rudimental histrionics a DCI "multiple" player lives by) a pair of tenors armed with multiple drum rigs could very economically deliver a huge amount of music and showmanship. (Imagine factoring flourishing into this scenario!!) One particular reality check on this is that even if all this time, effort and detail went into the

rigging of drums and production of the music, the "best of all worlds" maxim would have to hold that the judges should also be able to effectively critique this degree of intricately integrated sound.

IN CLOSING

Given the amount of debate on the tuning of tenor drums, this "identifiable pitch" issue isn't likely to be resolved anytime soon. I expect that more successful bands may not find much of use in what I've put forth, possibly maintaining an "if it isn't broke, don't fix it" stance—and rightfully so, if the masses (and judges) are already digging their sound. However, if we are going to examine tenor drum tuning in relation to the best possible blend of sound a pipe band can produce, being more knowledgeable about music theory and putting that knowledge to use in writing, playing, and critiquing midsection scoring is a must! I contend that the argument I've put forth here is a sound (pun intended) means of doing so. ■

The next issue of the *VOICE* will include feedback on the ideas in this article from several other drummers around the globe.

Dave Grebos has a BFA & MFA in Music from Carnegie Mellon University, has worked as a music educator at the high school and university levels, as a professional performer in jazz bands and symphony orchestras, and has been involved in the East Coast pipe band scene since 1967. He welcomes further discussion on the tuning/harmonic structure issue and/or the use of multiple drums in playing pitched passages. You may email him at jdgg3@psu.edu.

SCOTLAND THE BRAVE

The image shows two systems of musical notation for the piece "Scotland the Brave". Each system consists of three staves: "pipes" (melody), "harmony" (chords), and "tenors" (percussion). The key signature has two flats (B-flat and E-flat), and the time signature is 4/4. The first system shows the beginning of the piece with a 3-measure rest for the tenors. The second system continues the piece, showing a 3-measure rest for the tenors. The harmony staff includes chord symbols: B_b, B_b, E_b, B_b, F, F7, and B_b.

This arrangement for "Scotland the Brave" shows the melody, harmonic structure and a "tympani-like" percussion setting for three tenor voices, arranged by Dave Grebos to accompany the massed band snare part.

Historically, we have heard the bass drum being tuned lower than this—possibly to the G or F below (remember, historically tuning was a “function of little function”). As a result, this recommended note may initially seem high to the human ear by traditional standards.

The tuning of the baritone, tenor, and alto drums in concert pitch are B_b, D, and F respectively, in the same octave as the bass drone. Figure 3 provides a list of the voices of the drums and the recommended shell diameter for each pitch. If you are looking for a soprano voice in the midsection, it is recommended that you tune to the B_b an octave above the baritone drum (the actual octave of the tenor drone). If you have a musical background, you may question why the 7th (G) of the chord is not used instead. In my experience, the 7th often sounds unfinished within the chord and does not work well with the scale of the bagpipe, and is therefore not recommended for our purpose.

NOW WHAT?

Now that you know what note the drum is tuned to, it is only a matter of equally decreasing or increasing the tension in each zone to change the pitch until the required note is obtained (a TMD is no

figure 1: Bagpipe to Concert Pitch

Note on Bagpipe	Note In Concert Pitch (ie. Piano)
High A	B _b (1 octave above Low A)
E	F
C	D
Low A	B _b
Tenor Drone	B _b (1 octave below Low A)
Bass Drone	B _b (2 octaves below Low A)

longer required since all zones are already at an equal tension). By using a chromatic tuner and striking the drum in a location free of extraneous noise, you will be able to acquire a reading that will determine how close you are to achieving your desired note. I recommend a publication of the Australian Pipe Band College: *Bass, Tenor, and Alto Drum Tuning for a Pipe Band Performance* by Greg Bassani, which offers a series of helpful guidelines to follow when using a tuner. I continually check my tuning as my band practices, and prior to marching on the field when I hear the pitch of the bagpipe rising.

A word of caution—black heads look wonderful but are deadly if you are trying to keep your drum in tune. Black absorbs sunlight, which causes the heads to change rapidly and drastically.

We have just touched on the topic of

figure 2: B_b Chord (B_b, D, F)

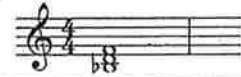


figure 3: Drum to Concert Pitch

Voice of Drum in Midsection	Note in Concert Pitch (ie. Piano)
Bass (28" or 26")	B _b (octave below bass drone)
Baritone (18")	B _b (octave of bass drone)
Tenor (18" or 16")	D (3rd of the chord of bass drone)
Alto (16" or 15")	F (5th of the chord of bass drone)
Soprano (16" or 15")	B _b (octave of tenor drone)

tuning in the pipe band midsection. The methods I have outlined for you in this article are solely a guide. There are many different styles of tuning that have wonderful value in today's pipe band. What is important is that there is a “method to our madness.” For me, reason is key. If you cannot explain or duplicate what you do each time, then I question the real function behind your process.

Happy tuning! ■

Edited from an article published in the May 2002 issue of *New Zealand Pipeband* magazine, with kind permission from the Editor, Chris Stevens, and the author.

Tyler Fry is the owner of TyFry Drumsticks in Kincairdine, Ontario, and a tenor drummer with the 78th Fraser Highlanders.

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9/30/2003

The World's 2003: A Judge's View From Outside The Ring

A prominent RSPBA adjudicator makes keen observations on a current musical trend with pipe bands

By Jim Hutton

With the season drawing to a close I felt that some attention should be drawn to areas of band performances that deserve airing for the general pipe band community.

Having played at the Worlds for thirty-five years, and judged there for the last eighteen, I was pleased to be picked to judge the Grade 1 MSR final, and the Grade 4B section in the morning, which I will deal with later.



The plus points this year were undoubtedly the weather, the large attendance, and 246 band entries. The layout and facilities much criticized in the past were first class, and the RSPBA and Glasgow Corporation Council have to be given well deserved praise.

The Stewarding was also extremely well handled, speaking for myself, and the team in the 4B section we were due to start at 9:10 a.m. and finish at 11:20 a.m., which we did—a good job well done.

After Judging the MSR in the early afternoon, I moved my position to a chair about ten yards away, to listen to the fourteen medley performances, and produce a list of my own preferences.

Following the Worlds and reflecting on the many competitions I judged in 2002 in the United States, Canada, and also taking in the New Zealand Championship at Napier, as well as my U.K commitments, I am disturbed by what has crept into band performances across the grades and in many, many cases dominates the band sound—namely, what is sometimes referred to abroad as the "mid section."

I am well aware of the background to this name, although with the agreement of my fellow adjudicators, and the RSPBA's Music Board, we still prefer to hear it referred to as the bass and tenor section of the drum corps (defined in the dictionary as a organized body of drummers).

The main thought for this title was through Tyler Fry of the 78th Fraser Highlanders Pipe Band from Toronto, who I admire for his enthusiasm for bass and tenor playing within the corps, and for the knowledge he and Mike Cole showed in articles in recent issues of the New Zealand Pipe Band Magazine.

All good stuff on tuning, pitch, and some of the sophisticated equipment available for this purpose. However as Winston Churchill one remarked, enthusiasm is a wonderful attribute, but must be controlled.

I would draw your attention to replies to these articles, by Allan Cameron of Auckland New Zealand, and Alex McCormick, a drummer from Melbourne Australia, who is a very fine musician on many instruments. Both touched on the most important aspect of the competence of the player to be able to participate with side drummers playing complex rhythms over a large range of time signatures that do not have a high degree of ability on the rudiments of the snare drum, or indeed can play to a reasonable standard within the grade they are participating in. I am also very aware that there are many who have this ability.

Integration of different tonal qualities at times does not allow musical flow due to so many players being involved in anticipating their reactions.

Where is the evidence that the actual area and methods of striking, coupled with the wide range of sticks (mallets) that are widely played, which in many cases due to their size and texture muffle the true tone and clarity of the present day bass and tenor drums?

The major point of this article is to come to terms with the number of tenor drums now being played in drum corps and where it will all end.

I have know doubt that various percussion instruments with a pipe band playing in a concert situation could add to that form of performance. However, I would draw your attention to an orchestra where the size of the percussion section is fairly small in number to the overall size of the orchestra. Within this situation the range of drums and other percussion instruments give a wide variety of tonal and pitch. There is also the ability for key changes to be made instantaneously depending on the music being played. Alas, the percussion section within the pipe band has a limited ability to carry out much of these functions.

The issue I bring to the table from listening from various locations around the band during the MSR performances at the worlds are:

1. In this competition many bands were dominated by their there bass and tenor sections.
2. Many bass drummers could not be heard at times again due to this domination
3. With tenors and bass so compact between pipers and snare drummers, a complete wall of sound was masking the balance of the band.
4. The number of complex rhythms tackled throughout the performance were almost

continuous, and with very little variation in tonal quality from the tenor tones did little to create good ensemble playing.

My first awareness of this new format was in the Grade 2 competition at Maxville In 2002, where many good performances of piping and snare drum sounds were spoiled by what to me seems like a desire to be recognized as a separate section, rather than part of a percussion section striving to bring the total band balance together by creating a sympathetic accompaniment through expression and dynamics.

A suggestion, and where do we go?

I consider that three tenors more than sufficient to have good integration with fifteen to eighteen pipers and six to eight side drummers

The norm is growing to four or five tenors, and with the addition of eight or nine sides and a bass, we have drum corps ranging in size from thirteen to fifteen total players. With a pipe section of eighteen this gives a ratio of between 43 to 45 per cent in a band where only 55 to 57 per cent are playing melody. What other forms of musical groups could sustain or indeed want such an imbalance of sound?

Would the works of the late Alex Duthart lasting four decade been any better admired if he had used more tenors? Would the Victoria Police of 1998 with three swinging and rhythm tenors have been a better band? Would the 78th Frasers of 1987 fame been any better if Luke Allan had more tenors? Would Andy McMillan of Shotts and Clan MacFarlane play better in this new age?

The answers lie with the pipe-majors and leading drummers of Grade 1 to control the situation. Why? Because in the Grade 4B contest in the morning of the World's I was faced with the same situation where new, inexperienced bands that struggle to get good tuition were lining up with three, four or five side drummers and three or four tenors, and a bass supporting pipe sections ranging from seven to fourteen.

The sorry tale is that this is now mirrored through all grades, with the exception of the Juvenile bands both from home and overseas who over the last three to four years have been privy to good tuition both in piping, and drumming.

There are good bands in all the grades, but from Grade 3 down the major need of these groups is to ensure that they can, where possible, add better players to the band and secure teaching facilities that will improve basic skill levels, and lead to greater enthusiasm to progress to higher levels.

Here is a list of problems that may help bands to focus on key areas that need attention:

1. When you are aware that some members are not up to standard, play them only in

small competitions, so the band will be better placed at championships. This will encourage the performers, and also the others to practice to reach higher goals.

2. Play two tenor drummers and have them involved in side drum instruction.
3. Increase drummers' awareness to practice an even sustained pulse rolls. It is surprising to hear poor rolls even in the upper grades, where a variation of tightness of pulse can be heard throughout the corps.
4. Teach settings so that pupils get to know the melody, and teach from an early age variation in stick weight and dynamics. This should be done in all time signatures and in street parades so expression to melody becomes second nature.
5. In many instances where unison is played throughout a competition, the judge will be aware that there are players who are not always playing. This happens in all grades, and can be caused by lack of concentration. As I remember, no one admits to it after they finish, especially if the judge has it on the sheet.
6. When complex tunes are being played, with little or no melody to show the finger dexterity of the pipe section, the need for side drummers to follow with high intensity of demi-semi-quavers will lead to a disturbance in ensemble.
7. Most leading drummers have a good feeling for dynamic flow, but in many instances some of the corps will be so intent on ensuring they play together, they will play with constant volume that negates the other players' efforts.

By this time some readers will feel I'm biased against tenor drummers. I strongly refute this, and my main concern is for good band ensemble, and the use of good structured performances being produced from all areas of the band.

If bass and tenor players want competitions for their own enjoyment, I can go with that, and have done so in United States and Canada for many years. If other instruments are used in concert work. many bands have proved that this can work.

Concert work will develop further for pipe bands, but sadly it will be for mainly the top Grade 1 bands that the paying public have an ear for, the marketing and management skills, and, most importantly, sponsorship. Even at this level the number of concerts either solely produced or in tandem with other Celtic events will not produce many opportunities for most of the 246 bands at the World's.

In ending I would ask that you consider the size of bass and tenor sections, their influence on the many lesser grade bands, and the effect on the quality of music produced on the major pipe band contests held in the present format.

One problem that still exists for all drummers is the reluctance of drum manufacturers

to produce a small guide book with information on the basic care of drums and methods of tuning. I have spoken to the directors of two major companies on this over the last four years, and so far there has been no action. They should remember that the largest number of sales come from the lower grade bands where knowledge of the instrument is at its lowest.

If you buy a electric Kettle for £40 you are given a guarantee, and an instruction book on how to get the best use out of the appliance. Surely when drums can cost from £400 to £900, a little £1 book would be a nice touch.

I was pleased to see that the attendance was again up this year at the World's, especially when 600 were additional tenor drummers.

What do you think? Please submit your signed comments for possible future posting to P&D Online.

Jim Hutton is one of the RSPBA's most respected adjudicators. He played with Alex Duthart's Shotts & Dykehead corps for many years and was the Leading Drummer of the renowned Muirhead & Sons Pipe Band. He was the subject of the February 2000 Piper & Drummer magazine interview.

10/3/2003

**A Response to Jim Hutton's Article On The 2003 World's
By Scott Currie**

There has never been a better time to be a bass or tenor drummer than now. Bass sections have never been so innovative or effective than they are today, pipe-majors and leading drummers are exploiting their bass sections pro-actively to enhance their bands ensemble effects, the quality and range of instruments available is unsurpassed, and tenor drummers worldwide have the opportunity to compete in solo competitions.

All of this begs the question of why Royal Scottish Pipe Band Association adjudicator Jim Hutton would make an unexpected and outspoken attack on what he refers to as the disturbing and dominant "mid section" that has crept in to pipe band performances.

There is absolutely no doubting the impressive credentials of the author as an accomplished snare drummer and adjudicator. However, with all due respect to Mr. Hutton, with no apparent competitive experience as a bass or tenor drummer, it remains to be seen whether or not he has the mandate or authority to act as a public critic of bass and tenor drumming or the progress that it has made in recent years.

Mr. Hutton's article on today's bass sections offers a wide array of personal criticisms with very little suggested alternatives. Indeed, many of the arguments made are contradicted by the author.

Impartiality without prejudice by a senior adjudicator is paramount to ensuring that a competition is judged with all due fairness towards every competitor. Some areas of the article cast doubt over such impartiality, with some of the personal opinions offered on the make up of a bass section and how it should perform leaving the reader to wonder how his drum corps can ever achieve success when the author is adjudicating if the number of drummers or style of performance doesn't conform to his ideals.

Since the publishing of Mr. Hutton's article on *Piper & Drummer Online*, tenordrummer.com has received a number of e-mails from concerned tenor drummers around the world venting their anger at the nature of the article's content. As tenordrummer.com is a Web site which has a global audience of bass and tenor drummers visiting more than 12,000 times a year, it is incumbent on the site to offer a response on behalf of the bass and tenor drumming community in defence of the article in question.

As the article is lengthy, there are a number of points of contention:

Albeit Tyler Fry advocates the use of the term "Mid Section," he will be the first to tell you that he did not invent the term, rather, it has been a term used in reference to the bass section for much further beyond the years that Tyler himself has been drumming.

<http://www.piperanddrummer.com/features/default.asp?articleID=3335>

10/24/03

"Enthusiasm is a wonderful attribute, but it must be controlled." By whom exactly? The enthusiasm, creativity and innovation shown by today's bass section is one of the most exciting areas of the pipe band performance. For a bass section to stifle any enthusiasm they have towards their art serves only to create strict uniformity throughout the discipline – a trend that has taken the best part of 20 years to break away from. These areas should be left to the performers alone to decide where the boundaries lie, unless directed otherwise by the governing associations. It certainly is not the role of the adjudicator to stipulate what each bass section should or shouldn't integrate into its performance.

The reference made towards integration of tonality interrupting the musical flow could be said of any aspect of a pipe band performance where an element of reaction is involved, per say a piper playing seconds in a slow air or a snare drummer playing chips in the piano fortes of a march. Listening to the recordings of Grade 1 from the 2003 World's, it is difficult to ascertain any evidence of any integration troubles between tenor drummers struggling to come to terms with when to play their part of a split rhythmical phrase.

To attempt to draw any parallels with the percussion section of an orchestra and a pipe band bass section is inherently flawed. However, today's bass sections can provide an array of tonality to a performance if there are sufficient numbers in the bass section. Much of this is down to the wide range of sizes of tenor drums being utilised and the quality of their tuning. In fact, orchestration within the bass section is nothing new. As long ago as 1973, progressive leading drummers were incorporating orchestrated effects into performances, an example being the use of tenor drummers to good effect in The Intercontinental March, written no less by a current member of the adjudication panel who helped advocate the effective use of tenor drums that is more than evident today.

One of best examples to cite from this year's World's would be the bass section of World Champions House of Edgar-Shotts & Dykehead, in which they have five tenor drummers playing different sized drums, fine tuned to specific notes on the major and minor scale which are conducive to matching rhythmic passages to phrases in the melody and assisting in key changes independently from the melody. Both of their bass section performances provided excellent tonality to their performances, executed with a level of accuracy which showed no evidence of integration troubles.

Indeed, the same could be said for many of the bands that performed in the Grade 1 Final. As for dominance, again, there is no apparent evidence of this from any recordings or of any of the performances heard on the day. It is also worthy of note that being the professionals they are, none of the pipe-majors, leading drummers or indeed bass sections themselves in Grade 1 would have taken a performance onto the final of the World's that would have been likely to spoil their chances due to dominance

by volume or rhythmical content. This being the case, any dominant performances would definitely have been in the minority and hardly worthy of public broadcast here. In any case, it is unfair to generalise that dominance by bass sections and tenor drummers is a problem throughout the grade.

In the suggestions as to where we go after considering the arguments presented, the author suggests that 3 tenor drummers are sufficient. This suggestion draws three possible questions from the reader:

If my bass section has four or five tenor drummers (as the author qualifies is becoming the norm), does it have any chance of winning a best bass section award or the drum corps winning the contest if the author happens to be adjudicating them?

If three tenor drummers are the correct amount to play, why then did the author award the best bass section to a "mid section" consisting of four tenor drummers and the drum corps to a corps with five tenor drummers? Actions speaking louder than words perhaps?

Why is three tenor drummers the correct number? Why not four or five?

The essence of the use of tuned percussion as is now the best term to apply to modern bass sections is that each player sounds a particular pitch and as such, only one tenor drummer plays at any one time. Simple observation of Grade 1 bass sections such as HOE-Shotts & Dykehead, 78th Frasers, Boghall & Bathgate, Dysart & Dundonald and Strathclyde Police (to name but five) would reveal this to the onlooker and the question of dominance due to numbers of players is therefore a fallacy. The greater number of players means a greater spread of pitches, not increased volume.

It was also unfair to draw comparisons between performers and performances from the past with those from this year's World's. The fact is, those performances were in the *past*. Here is now, five years of evolution and progress ahead of the most recent of the performances identified. For anyone who knew Alex Duthart, he was renowned as a pioneer of innovation and progress. Who is to say that the great man himself wouldn't have played more tenor drummers if he was still with us today. Being the innovator and leader that he was, in all probability he would have been the first to introduce four or indeed five tenor drummers to his bass section and made a success of their involvement, but such an argument is hypothetical and only serves to cloud the issue. At least we acknowledge this.

The final response is sadly in relation to the bands further down the grades, whose bass sections didn't escape criticism. For many in such grades, this may be the best they will achieve or may just be the beginning of a blossoming future. Either way, it is unfair to blame the tenor drummers for being too ambitious in their efforts, or indeed those in Grade 1 who they are attempting to emulate. For many lower grade bands, half of the

enjoyment of performing in competitions is having the opportunity to put into practice some of the tricks they have gleaned from their favourite bands in Grade 1. The same criticism aimed at the quality of Grade 4B bass sections could be levelled at pipe corps and snare sections in that grade too, but It would be just as unfair as it is to criticise those in the bass section out there trying to do their best.

The majority of advances which have taken place in Grade 1 bass sections have occurred with the active support and input from pipe-majors and leading drummers and are here to stay. Like it or not, that's progress. Only time will tell if the advances evident today stand up to the standards from years past, or conversely if those standards from the past would stand up to today's.

The complete bass section is no longer a dumping ground for failed snare drummers or pipers. Tenor drummers are now being given the recognition they deserve and are being acknowledged as performers in their own right. Popularity in tenor drumming is now at an all time high. This is reflected by the enthusiasm of the performers, which the article states should be controlled. The belief of tenordrummer.com is on the contrary – enthusiasm should be encouraged, for without it, the art form cannot evolve.

Such advances through enthusiasm and innovation are best left to those who perform and the criticisms levelled in this article are best left for the yellow adjudicator's sheets.

Tenordrummer.com would welcome the opportunity to host Mr. Hutton at a designated time in an online chat session with the bass and tenor drumming community to further debate the points raised by him. There must be at least 600 extra tenor drummers who would be very keen to chat with him.

Finally, this reply has not been made with any cynicism or malice intended towards the author, it is a forthright and measured response to many controversial points raised, which hopefully provides an outlet for the questions in the minds of the many tenor drummers who read this article.

What do you think? Please submit your signed comments for possible future posting to P&D Online.

Scott Currie has been a tenor drummer for 18 years, the last 14 years of which he has spent in Grade 1 with Shotts & Dykehead Caledonia and Strathclyde Police pipe band, winning bass section championships as a bass and tenor drummer. He is founder and editor of tenordrummer.com, the world's first tenor drumming networking resource.

10/14/2003

Readers Respond To Hutton, Currie Articles

The recent articles by RSPBA judge Jim Hutton and Strathclyde Police Pipe Band tenor drummer Scott Currie have created constructive worldwide discussion. *Piper & Drummer Online*, which first published the Hutton article, has been deluged by the thoughts of readers. Following is a selection of responses, and we thank readers for taking the time to write.

Piper & Drummer Online will follow this with a formal conclusion on the dialogue by Jim Hutton, who has supplied us with his closing thoughts.

"Very well written article that I heartily agree with. I would suggest this article be offered to every pipe band association for publication in their respective magazines. Also, this should be must reading for every snare and ensemble judge in the world."
- Al McMullin, EUSPBA President

"I would like to thank Jim Hutton for his honesty and comments he made on *Piper & Drummer Online*. I wish there were more people out there in the band community that besides offering criticism, backed up their statements with a sound argument, both theoretical and in practice.

"A perfect example of a modern pipe band that plays three tenor drummers, that play both rudiments and flourish is the David Urquhart Travel Pipe Band. When you hear the band play, the tenor drummers cannot be heard bashing away like demented idiots, they actually play with finesse, and appreciate the beauty of a good tone played at the right time. When they are playing runs, they can be heard, but not overpowering even the bass drum."
-Adam Nortman, West Midlands Police Pipe Band

"The problem with pipe band competitions is that they are subjective. If you have to rely on human judgment and the likes and dislikes of a judge, it's a crap shoot. The piping world is very slow and unreceptive to change. What was in vogue 20 or 30 years ago is stale by today's standards. What may have worked for Mr. Hutton as a lead drummer in his time is now for the most part outdated.

"Using several different tones within the section only enhances the overall performance. As a piper for more than 30 years I think this innovation is a positive one. I am by no means attacking Mr. Hutton's credentials, and most certainly respect his opinion, I would hope that he would try to be a little more open minded and try to look at this new trend as a positive one as opposed to something negative. If progress and innovation are stifled it would not bode well for the future of the art form."
- K.R. Clarke

"I have read Jim's piece with great interest. He covers many aspects of contest

performance and preparation all of which are valid but I infer that the essential thrust of what he says is that, in general, tenor drummers are increasingly imposing a disproportionate and unwelcome influence on the musical product. And with that I agree.

"It's difficult to say that so baldly without the expectation that a few feathers will not be ruffled. So in moderation of that viewpoint, like Jim, I believe that there is a place in the musical mix for a balanced contribution from a tenor section. Indeed there is some beautiful sound and rhythm being produced by a few corps. But it's getting to the stage now where we have the tail wagging the dog.

"Jim will probably recall the term 'jungle drumming' - I think it might have been coined by Alex Duthart or was it J K McAllister? That was in the days when 'ensemble' was discovered or invented and tenor drummers were getting in on the act with some pretty crude scoring and delivery. We're probably at that stage again now, where that description could justifiably be applied to the treatment dished up by some tenor sections notwithstanding the much greater sophistication in rudimentary technique and sound.

"Of course, the tenor lobby is becoming increasingly active and right now in New Zealand we have a bit of a campaign under way to allow the introduction of a full blown bass section judge as an added element to the piping, drumming, ensemble mix. I suspect that the campaign will be unsuccessful. As a backstop the activists are suggesting that the drumming judge should have a compulsory section on his sheet to appraise the bass & tenors.

"Jim hit it, right on the nail, when he said that it's the responsibility of pipe majors and lead drummers to restore balance before we have a tiger by the tail."
- Allan Cameron, Auckland, New Zealand

"Jim Hutton's comparison of a pipe band's drum corps with an orchestra's percussion section is flawed. The percussion section in the orchestra encompasses not just drums but tubular bells, hand rung bells, gongs, xylophones, glockenspiels, celestas etc. in normal terms and in addition is responsible for any extras. To give a couple of examples, the plethora of assorted whistles, rattles and hooters in Arnold's "the toy symphony" and the cannons/guns in Tchaikovsky's 1812 overture! So whilst I accept that the number of side, tenor and bass drums in an orchestra is small by comparison to the overall number of players the percussion section itself is quite large (in terms of instruments). It also plays a huge part in the overall effect of any piece performed. In addition the percussion instruments do not play continuously. Therefore there is no need for one player per instrument. This is why the number of people is small.

"Another blatant problem lies with the fundamental purpose of the drum corps in a pipe band - dynamics. In an orchestra virtually every instrument can (and does) produce it's

own dynamics and is written into their music. The drumming in an orchestra does not need to provide this. For this reason, I think that you can not compare a pipe band's drum corps with any other type of band either, whether rock, pop, military or brass.

"As a pipe band consists of basically four instruments, three of which are drums, and the main melody instrument unable to produce either dynamics or articulation these must come from the drum corps. I believe that the current setup of the entire drum corps in the top bands (to my ear) is excellent. The tenor and bass drums add dynamics and colour to the overall sound and I think that we are now a far better ensemble as a result.

"In the defense of Jim Hutton, I do think that we have reached the limit to the drum corps' input to the competition performance in its current state. A bit more from any part would be over the top. I am also of the opinion that the current competing styles of MSR and selection needs changing. Whilst an MSR retains a more 'classical' pipe band genre the selection is perhaps becoming obsolete and we need something more innovative to show off the bands, and it's pipe and drum corps individually, expertise and ability. (another argument entirely I accept).

"As a player in Field Marshal Montgomery and one who is seriously thinking about adjudication I am a tad dismayed at Jim's attack on the tenor section. They have been under-rated so much in the past it's good to see that they now have an important role to play. If there not going to, why have them in the band at all?

"I am not criticizing Jim in any way as he has as much right to an opinion as anyone, but let's keep things in perspective. An orchestra is no pipe band, and vice versa. The two are totally different and shouldn't be compared. Pipe band drumming is much more difficult, entertaining and involved than in any other type of band. It's become more than an accompaniment and tempo keeping. Let's not lose this. Let pipe band drumming set the standard of marching type band drumming the world over!"
- Guy Rylatt

"I agree fully with the points raised with one worry. As former Pipe-Major of a lower grade band I possibly witnessed my drum corps being penalized because they were supposedly thin on the ground. If we apply the formula you suggest then we would have had sufficient in ratio to those playing the melody, the pipers.

"Having discussed this at length, with my then leading drummer, he said that 'it was because of the expectation of adjudicators who gave points for size of corps sometimes with as much emphasis on quality of music produced. This was putting pressure on Bands to throw on as many as possible.'"

"Maybe it is this which has created a monster. Some kind of clear guidance from the authorities may be required for the bands and adjudicators. It can't be difficult."

- *George Sharp*

"I believe Mr. Hutton raises some valid points, and I congratulate Scott Currie on his considered response. In my opinion, as a piper having played in bands at all grade levels, the number of drummers or pipers in a band is immaterial. The key issue is how each individual band integrates all corps into the musical performance, and a highly skilled large drum corps should be capable of producing a balanced performance complimenting the pipe corps. Let the ears do the listening!"

- *Tim McLeod, Warrnambool Pipe Band, Australia*

"Jim Hutton's point about not being able to hear the bass during a performance is a trend that has become all too prevalent. Balance, tonal quality and ensemble expression are compromised all at the expense of the piping and the total objective of the medley itself.

"Hutton's analogy to orchestral balance in percussion is essential and similar applications should be used in pipe bands to accentuate ensemble balance as a total performance.

"Piping and drumming band members whose opinion I respect immensely all agree that a trend to 'mid section call and echo' needs to be moderated and balanced in competition settings as it is very disturbing to play within and to listen to."

- *Bill Alty, Ontario*

"I would like to agree whole heartedly with Jim Hutton. After being away from the band world for many years I recently attended a couple of contests just to introduce my kids to the sound and atmosphere of pipe bands and drumming. I was a bit disappointed to hear most of the corps playing scores that only a couple of the drummers were able to manoeuvre around. Weak layer obviously hidden in the corp and has drummers forgot about light and shade. Scores should always accompany the melody. Listen to the tune and write the score to complement the tune and ensemble. This is a major point generator in competition - or it was in my day.

"I might be biased, but maybe not. Just listen to some of the recordings from the 1970s."

- *Gary Stutt (member of Dysart & Dundonald in the 1970s)*

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The adjudicator must be seen to lend support to their colleagues, to the decisions of their colleagues, to the policies of the organizers, and generally to the PPBSO.

Adjudicators must refrain from attempting to influence the judgement of their colleagues. In "bench" situations, discussions should be reserved for the privacy of the period following the competition.

Sanctions

As a member of the Adjudicators' Panel of the Pipers' and Pipe Band Society of Ontario, any conduct which contravenes this Code may result in a verbal sanction, a written sanction, supervision by the Music Board, or temporary or permanent removal from the panel. Such sanctions will be administered by the executive on the recommendation of the Music Board.

Adjudicators must write critique sheets clearly and constructively, using appropriate musical terminology. Written criticism should endeavour wherever appropriate to serve the twin functions of documenting the reasons for the placing of the performance and assisting the competitor in attaining a higher standard of performance.

It is important for Adjudicators to be approachable, so that competitors may seek clarification and initiate discussions in a non-threatening environment.

Responsibility to Organizers

Adjudicators must be reliable, prompt, and appropriately equipped to fulfil their duties. As well, they must be turned out in proper Highland Dress, subject to climate and weather conditions.

Adjudicators must seek actively to familiarize themselves with the rules of the jurisdiction in which they are adjudicating, and apply these rules with good judgement. All required procedures for marking, placing, and assessing competitors' performances should be strictly adhered to.

Adjudicators are hired to judge the competitions and must do so without ties in the top six places.

Adjudicators must portray a serious and impartial demeanour to lend the weight of their position to the event in which they are participating.

Adjudicators must not release results prior to formal prize-giving, without specific permission from the organizer or sponsor.

Responsibility to Colleagues

The adjudicator must respect the confidentiality of a "bench" (2 or more judges acting in concert), supporting collective decisions and retaining in confidence any deliberations leading to those decisions.

2.21.2

1. STANDARD PITCH (CONT'D)

Although the lack of standard pitch is a much discussed topic in the piping fraternity it is difficult to argue that as long as the instrument is in tune and has a musical sound, the pitch can be no more than a personal preference.

2. INDIVIDUAL ABILITY

Every person has a different level of musical ability. Those with the greatest ability usually have less difficulty in understanding pitch in instrument tuning, therefore some will have more musically sounding instruments. Those lacking this natural ability will find tuning very difficult, but will learn to cope with this by seeking as much help as possible from other pipers who have this greater ability.

Having recognised pitch, another aspect of ability is learning to provide a steadfast, constant pressure to the reeds. This will ease the task of tuning. This skill can only be achieved through patient practice in listening to the sound of the instrument for that constant level of pitch.

3. ATMOSPHERIC CONDITIONS

Whether played indoors or out, the bagpipe is very sensitive to changing atmospheric conditions. The piper will learn, usually from experience, how the instrument may be affected.

Playing in warm or even hot conditions can result in the pitch 'climbing', with the result of a deterioration in tuning and quality in sound.

Cold or wet conditions may have the effect of a drop in pitch, and again, a loss of tuning and sound quality.

Understanding the effect of atmospheric changes should be considered in respect of performance. The duration of the performance further complicates this, and it takes fine judgement to get the best from the instrument.

2.21.1

PRACTICAL - INSTRUMENT TUNING

THE BAGPIPE

When the bagpipe is correctly tuned, the drones provide a constant (pedal) harmony, and the individual notes of the chanter form a harmony of their own with the drones.

This apparently simple exercise is beset with many difficulties which take a considerable time and application of techniques to master.

Viz a viz:-

1. Lack of standard pitch.
2. The individual's ability to recognise differing pitches, and to maintain a consistent pressure.
3. The condition of the atmosphere (i.e. dry, humid, damp etc.).
4. Instrument quality.
5. Quality of reeds.

1. STANDARD PITCH

Unlike most other instruments, the bagpipe does not have a standard pitch, therefore pitch is usually a matter of individual taste.

Low A, the note to which the bagpipe is tuned varies in pitch between Concert A at 440Hz and B \flat at 466Hz.

The height or depth of pitch has a very important effect on the quality of sound produced by the chanter.

A higher pitch produces a thinner sound whilst a lower pitch results in a broader sound.

If the pitch of the chanter is too high or too low, the sound becomes imbalanced with individual notes going out of pitch. Additionally the chanter reed may not vibrate correctly resulting in 'skirling' (squealing) or 'chirping' (short squeals).

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2.13.2

DEGREES OF THE SCALE (CONT'D)

The first (I) is termed the TONIC or KEYNOTE.

The eighth (VIII) is the OCTAVE, sometimes termed the UPPER TONIC, but must also be considered to be alternatively the eighth of one scale and the first of a new scale.

The fifth (V) is the DOMINANT and has an important (dominant) role in the scale.

The TONIC and DOMINANT are the two most important notes in defining the key. (Keys will be discussed in greater detail at a later stage).

The fourth (IV), the SUB-DOMINANT, is the degree immediately below the DOMINANT.

The third (III), the MEDIANT, is mid-way between the TONIC and the DOMINANT.

The sixth (VI), the SUB-MEDIANT, is mid-way between the SUB-DOMINANT and the OCTAVE.

The seventh (VII), is the LEADING NOTE because it leads to the OCTAVE.

The second (II) the SUPERTONIC, is the degree immediately above the TONIC.

The terms used in this lesson must be understood and memorised as they form an important part of future lessons on scales and intervals.

N.B.

All of this lesson refers to the diatonic scale which will be covered at a later stage.

2.13.1

LESSON 13

DEGREES OF THE SCALE

The degrees of the scale (pitch) are represented by the first seven letters of the alphabet.

i.e. A; B; C; D; E; F and G (repeated as required).

These notes are further described according to their position on the scale as follows:-

1. Numbers (1-8).
2. Order of importance.

The purpose of this further classification is to define the intervals of the scale and indicate the importance of each note in relation to the TONIC, the first note of the scale. Each degree of the scale is given a number from 1 (I) to 8 (VIII), and are often referred to by their number.

e.g.

The note which has the number 5(V) is termed the 'fifth' (not always the fifth note), simply the 'fifth', and so on with the other numbers. The 'eighth' (VIII) is usually termed the OCTAVE.

The 'importance' names are derived from their role or position on the scale.

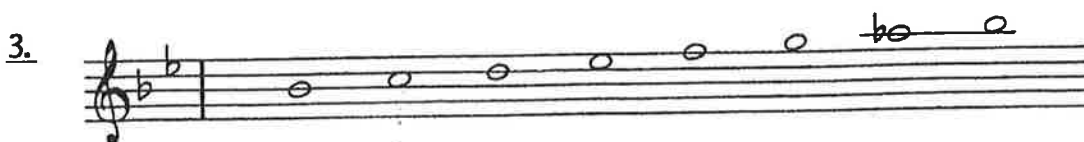
I	II	III	IV	V	VI	VII	VIII
1	2	3	4	5	6	7	8

The diagram shows a musical staff with a treble clef. Eight notes are placed on the staff, corresponding to the degrees I through VIII. Vertical lines connect each note to its importance name below the staff:

- Degree I: Tonic (Keynote)
- Degree II: Supertonic
- Degree III: Mediant
- Degree IV: Subdominant
- Degree V: Dominant
- Degree VI: Submediant
- Degree VII: Leading note
- Degree VIII: (Octave) Upper tonic

3.7.2

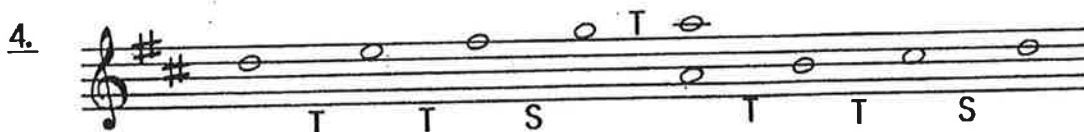
When sounded however, the scale produced by the bagpipe approximates to that of B \flat Major, with a diminished seventh, (i.e. as shown in diagram 3).



Observe that the tonic now occupies the position of B \flat and that the seventh is affected by the flat.

This scale may be described as a "Mixolydian Mode with a tonic of B \flat ." (The "Mixolydian Mode" is derived from the "Lydian Mode").

In the **written** form, where D is the tonic of a bagpipe composition, it conforms to the general tone-semitone pattern of a Major Diatonic Scale. This is illustrated in diagram 4.



When a bagpipe melody is **written** with D as its tonic, the melody is in the key of D major.

When **sounded**, however, the scale produced approximates to that of E \flat major (i.e. as shown in diagram 5).



Observe that the tonic now occupies the position of E \flat

Again, the scale may be described as a "Mixolydian Mode with a tonic of E \flat ."

Diagrams 6.1 and 6.2 show the notional transposition of the scales of the commonly used tonics A and D. The diagrams also show the **actual sounds** produced. These approximate to B \flat Major and E \flat Major respectively as previously described.

3.7.1

LESSON 7

SCALES (PART 4)

THE BAGPIPE SCALE

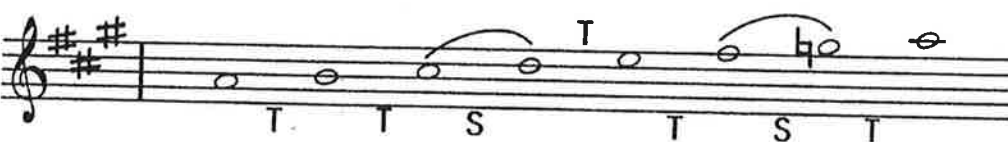
Notation for the Great Highland Bagpipe is written indicating a pitch different to that of the actual sound produced. This identifies it as a **TRANSPOSING INSTRUMENT**.

In all transposing instruments (such as the Great Highland Bagpipe and most woodwind and brass instruments), the written notes represent the fingering as opposed to the pitch of the sounds produced.

Examination of compositions based on the bagpipe scale reveals that the most commonly used tonics in the written form are A and D.

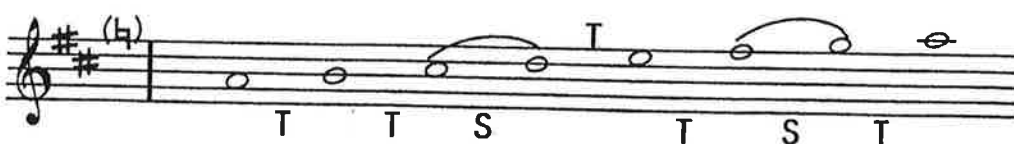
In most cases, a bagpipe melody has the tonic as its final, or last note (i.e. the note on which the key signature is based).

In the written form, where low A is the tonic, as in diagram 1, the notation includes a diminished seventh and represents the A major scale as appropriate for the bagpipe.

1. 

Observe the use of a "natural" sign at high G (low G is also affected by the natural sign).

Written bagpipe music therefore requires a modified major key signature. (i.e. the third sharp - G - of the A Major scale is replaced by a natural sign). This eliminates the need to show the A Major key signature and a natural sign at every G note. This is illustrated in diagram 2.

2. 

1.7.3
LESSON 7

STAFF NOTATION - THE COMPASS OF THE BAGPIPE

The pitch range, or compass, of the bagpipe and pitch range of the bass and tenor drums are shown on the Great Staff as depicted below.

Range of Chanter Scale

G A B C D E F G A

Leger Line

Middle C

Bass Drone

Tenor Drone

Bass Drum

Tenor Drum

proved wrong

All tuned relative to Low 'A' on the Chanter

1.2.1

LESSON 2

SOUND (PART 2)

THE CHARACTERISTICS OF SOUND

The characteristics of sound are:-

(1) **PITCH**

Height or depth of sound

(2) **VOLUME**

Loudness or softness - intensity of sound

(3) **QUALITY**

Timbre - tone colour

PITCH is the height or depth of sound and is evident as the difference in pitch between:- e.g. An adult's voice and that of a child, or the rumble of traffic and the screech of brakes.

Pitch is measured by the number of vibrations generated by the vibrating body and this is expressed as "CYCLES PER SECOND" or Hertz (Hz).

The greater the number of cycles per second (Hz), the higher the pitch and conversely the lower the Hz, the lower the pitch.

In the bagpipe, the vibrating bodies, that is, the reeds, set columns of air vibrating along tubes - the chanter and the drones.

The length of the column of air has a direct influence on pitch. The longest drone, the Bass, is lower in pitch than the shorter drones, the Tenor.

The chanter uses the same principle. The lowest note, Low G, is the furthest from the reed, therefore the air column is long, and, as the player raises fingers one after the other, to sound low A, B etc., the air column is shortened and the sound or notes are successively higher in pitch, (See page 1.2.3).

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1.2.2

PITCH (CONT'D)

The different sizes of bass and tenor drums also indicate that principle of larger vibrating bodies giving lower sounds.

Other vibrating bodies such as bells, metal tubes, harp strings etc., indicate the relationship between size and pitch.

(In later lessons, vibrating body density and tension will be discussed, and how they affect pitch).

VOLUME, also called AMPLITUDE or INTENSITY is the degree of loudness or softness of a sound. Just as pitch indicates the frequency of sound, the word volume describes the amplitude - the distance between the peaks and troughs of the wave pattern (See Figure 2).

QUALITY, also called TIMBRE or COLOUR is what distinguishes between sounds of the same pitch e.g. a trumpet from bagpipe, whether one piper has a better sound than another.

When a musical sound, or note, is produced, the quality of the sound is affected by other less easily heard/distinguished sounds which are produced at the same time as the main pitch note.

This central or main pitch note is called the 'FUNDAMENTAL' and the other sounds which occur at the same time are called 'HARMONICS', 'OVERTONES' or 'PARTIALS'.

When two different instruments sound alike, this is due to the similarity of the harmonics.

(The characteristics of sound will be discussed in greater detail at a later stage. This will include Intervals, Scales, Semi-tones and accidentals).