UK Association for Accessible Formats UKAAF

Modified Stave Notation

Meeting individual needs for large print music

Guidance from UKAAF

UK Association for Accessible Formats (UKAAF)

Because format quality matters

Why format quality matters

"When organisations send me information in formats that I can read myself it allows me to be independent, feel informed and appreciated - just like every other customer."
End-user

"Producing consistently high quality accessible formats helps us to maintain our reputation, to gain new customers and to retain existing ones."
Transcription agency

"We are committed to ensuring that our customers with print disabilities receive the same information, of the same quality, as everyone else."
Service provider

Who is this guidance for?

This guidance from the UK Association for Accessible Formats (UKAAF) is primarily aimed at transcribers of music stave notation into Modified Stave Notation in formal and informal settings. It will also be useful as an assessment tool for schools, colleges and amateur and professional musical organisations working for the first time with a musician who is able to read some print but unable to read standard music stave notation.

The guidance includes:

- A definition and fundamental principles of Modified Stave Notation (MSN)

- A list of UK examination boards using MSN

- Ways of handling MSN

- Testing what modifications may make stave notation accessible for particular uses and in specific environments

- Ways of saving preferred alterations in software packages

Disclaimer

This guidance may include references to external websites, services or products for which UKAAF accepts no responsibility. This information is given without any representation or endorsement of those websites, services or products.

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1 Introduction

By obtaining and following these guidelines you are demonstrating your commitment to helping people with a print disability to read your materials if they find reading standard print materials difficult or impossible.

UKAAF's guidance concentrates specifically on materials suitable for blind and partially sighted people - such as large print, audio, braille and electronic file formats. However, others with a print disability, for example with dyslexia or motor-difficulties, may also find such materials necessary.

The provision of accessible information is a key requirement of the Equality Act which service providers must follow, but good customer service and business practice includes communicating with your customers and staff in ways which meet their reading needs. By providing accessible format materials, you not only demonstrate your commitment to equality and inclusion, but also increase your reach and customer base. It therefore makes good business sense.

This guidance will help you and your organisation to incorporate good practice into your business and provide good quality accessible format materials in a timely and appropriate way.

2 About UKAAF

The UK Association for Accessible Formats (UKAAF) is the industry association whose mission is to set standards for accessible formats that meet end-user needs through:

• development, delivery and promotion of codes, standards, and best practice for the production and provision of accessible formats

- consultation and collaboration with transcribers, service providers and users of accessible formats.

Members of UKAAF include organisations and individuals with an interest in the provision of quality accessible formats, such as service providers, transcribers, educators, researchers, print services, publishers, and end-users.

Through its leadership and representation, standards-setting, and by fostering a spirit of cooperation between members, UKAAF ensures that the needs and requirements of end-users are understood by service providers and transcribers to help improve the quality of accessible formats.

Please see the section on "Where to get further help" towards the end of this document for more information about the benefits of being a member of UKAAF.

3   Definition of print disability

A print-disabled person is anyone for whom a visual, cognitive, or physical disability hinders the ability to read print. This includes all visual impairments, dyslexia, and any physical disabilities that prevent the handling of a physical copy of a print publication. Source: Copyright Licensing Agency Print Disability Licensing Scheme, Guidelines for Licensees 2010.

4   What is Modified Stave Notation (MSN)?

Modified Stave Notation is "A term given to describe music in large print. MSN enlarges the music generally and makes a score more consistent, but it also alters the proportions involved. The spacing of notes is adjusted and other features such as articulations and expression marks may be disproportionately enlarged." (p 59 and following, G003, UK Association for Accessible Formats, (UKAAF), 2012)

Image of original music score

Image of Modified Stave Notation

Some basic parameters to consider are outlined in the UKAAF document. This document expands these. Instrumental and vocal grade examination boards (such as ABRSM and Trinity Guildhall) and GCSE and GCE examinations boards (namely AQA, Edexcel, OCR and WJEC) present stave notation in their Modified Print papers as MSN.

Basically, in MSN, smaller symbols are made proportionately larger than large symbols. Gaps between symbols left to right are reduced to the workable minimum. Symbols around the stave are placed wherever possible in the same position relative to the stave so the reader knows where to look for them (as in page numbers, bar numbers, dynamic markings always above/below stave etc.). Verbal descriptions are given at the opening of the score about any unusual, or any unusually, small symbols, stating where the symbols appear.

5 Who uses MSN?

Musicians who find ordinary stave notation, in all its hugely varied layouts, very hard to read and use efficiently. Musicians who have dyslexia or are partially sighted will be in this group.

Using MSN is one part of accessibility for musicians. Other factors include the following considerations. The variables beyond the music notation itself include quality of lighting, how far and at what angles the music has to be from the reader's eyes and what else needs to be seen such as a conductor or fellow performers.

6 How is MSN used?

MSN is used by some musicians in the same way as stave notation, reading and performing at the same time. The MSN overcomes all the difficulties. This may mean holding the score in the same way as a neighbour in a choir and rehearsing effectively navigating the modified score which has just a single vocal line rather than four part chorus and piano accompaniment to preserve the page layout all are using. It could be learning an organ piece with the music placed on the console's music rest and sitting upright on the organ bench at a usual distance from the print music. It might be studying and then handwriting missing parts in a chorale harmony exercise in an academic class, reading the music laid on the desk and writing in pencil again from an angle and distance matching peers.

MSN is however more usually used at a specific added stage in learning. It is often used to memorise the music prior to its final use in performance, analysis or whatever. This memorisation may be done purely from hardcopy MSN, or may involve using a CCTV, displaying on a desktop computer with further technology (such as audio output, score scrolling, magnification, colour alteration) or using in conjunction with an external recording. Modern technology, such as portable tablets and other mobile devices, allow MSN to be displayed on screen, with the facility to zoom in and out at a mere finger pinch.

It is more customary for musicians with severe visual problems to read, memorise, and play/sing from memory rather than to read

and play at the same time. This difference has considerable implications for preparation time required and also in the selection of detail needed to be learnt. It also places an emphasis on users acquiring a range of memorisation strategies not usually taught in instrumental and vocal lessons.

7   How is MSN produced?

Currently MSN is largely produced in the UK using Sibelius software (www.sibelius.com) but there is a growing number of people using MuseScore (www.musescore.org). All MSN is bespoke, tailor-made to individual requirements of both sight and context. There is a transcription service offered by RNIB based in Ivybridge, Devon. Some other bodies produce MSN for specific music, such as ABRSM and Trinity College for sight reading in examinations. Some users have personal assistance in producing MSN.

It is also quite easy to produce one's own MSN, having access to mainstream music notation packages and knowing how to use it, once a preferred format has been sorted. An important part of MSN is consistency, given that people who find reading print difficult are probably always going to find reading a struggle. So setting up one's individual settings as a distinct "manuscript" in a music notation package enables the user to import any other file in that format and get the preferred style at a press of a button. What still has to be done manually for each piece is adjustment of system and page breaks, which usually depend on the music's structure and the required use. This would, for example, include altering page breaks to show discrete sections of a piece all on one page, or making page turns during bars rest.

8 Finding preferred symbol sizes and positioning

8.1 Where to start investigation

Whilst new symbols to modify will emerge with new pieces of music, a basic "preferred format" settings list can be established at the outset of using stave notation as a main means of accessing music or as a subsidiary way of checking composer's intentions from auditory sources.

It is presumed that the user of MSN has some knowledge of the symbols used in stave notation and their meaning. The musical concepts behind the symbols need to be grasped before the squiggly shapes have significance. (There are many references in music education literature to "sound before symbol".)

A warning should be issued here to teachers working with beginner pupils, especially children. Students may appear to look at the music, appear to follow it and indeed play or sing it accurately. However, this may be an illusion. They may have learnt from the teacher's playing. In traditional instrumental tuition the role of the music stand has become pivotal to the extent that researchers have found pupils asked to draw themselves learning the violin, say, draw themselves with instrument, a music stand with music and then the teacher. (See, for example, Educate Vol 6, No 1, 2006, pp. 35-56
http://www.educatejournal.org/index.php/educate/article/view/93
"Every picture tells a story: Pupil representations of learning the violin" by Andrea Creech and Susan Hallam.) It is easy for a sighted teacher using notation all the time to presume a pupil is doing the same.

8.2   First steps to preferred format

Consider where the music is to be used and what is essential to read in the music. There may be some variables, both visually and musically.

Visually, lighting may alter between a well-lit rehearsal room and an "atmospheric" candle-lit performance area. Music stand distances may be different at a keyboard at home and a piano at the teacher's studio. A set work score may need to fit in a school bag and not look too unlike peers' music in school but be more clearly read under a CCTV at home. A score might be read on a large monitor screen in one place but also on a small screen on a portable device.

Musically, fingering may be the most important signs for a keyboard player learning mainly by ear from a commercial recording. Cues may be needed in a choral piece for pitching entries. Slurs may be the new technique introduced by, say, the clarinet teacher.

Ascertain some basics by asking the recipient to handwrite a few musical symbols, from memory, using the preferred thickness and colour of pencil/pen.

Then assess the following:

- how wide the stave lines are
- how thick the staves are
- how big the note heads are
- how big the stems to notes are
- how big any note tails are

(Where a teacher is assessing a pupil doing this, notice any misconceptions over symbols. Some pupils will misplace tails on

note stems or write the note stems going to the centre of the note head, like a lollipop. Whether the note head is filled or unfilled may be confused. Others may write fewer than five stave lines.)

8.3   Stave size and page orientation

In the chosen software package in layout settings or basic formats try to:

- Replicate the size of stave, now often measured in mms but formerly in rastrals. Write down this size.

- Decide on a portrait or landscape page format. Write down the preference. For some having fewer lines per page makes finding the next system less of a hassle. It also makes the music stay on a stand more easily and includes more in the visual field. For others portrait is more suitable, again because of a different type of visual field, perhaps as it is easier to light with a special clip on light etc.

Once stave lines size has been altered in most packages all symbols are altered in proportion.

Whilst dealing with the stave lines experiment with thickening and thinning the lines. Write down the new setting.

8.4   Notes and bar per system

Next consider the notes themselves and features immediately linked to them.

- Alter the note stem thickness. Write down any change. Begin to examine how many notes can be seen around a note the recipient focuses on. What is the maximum number of notes seen whilst still focussing on a central one, after the transcriber has moved the notes closer together?

- Count the number of average length bars per system after the reforms. Later on this is needed for reformatting the complete score.

- Are duration dots clear enough? Experiment with moving them closer or further away from their note. Experiment with altering their size. Write down the result.

- Beams on joined notes. Would it help to have these lines always parallel to the stave rather than following the direction of the melody? Would it help to have them thicker? Would it help to alter the tail direction of some notes on the middle line (or indeed elsewhere if you don't mind breaking the rules) so that all the stems in a passage all go up or down? Write down the result.

8.5 Markings around notes

Next consider the markings around notes.

- Would thicker slurs and ties help? Would it help if these were placed outside the stave? In general, MSN tries even harder than ordinary stave notation to avoid signs overlapping. So sometimes having, say, staccato dots all parallel to the stave but out of it is more helpful than dots appearing in the stave partly following the melodic line.

- If the notes have staccato notes or tenuto markings or accents, would it be helpful to have these outside the stave in a line parallel to the stave, or do they better follow the melody in and out of the stave? Do they need to be larger and/or closer to their notes?

- Are accidentals, particularly the difference between a natural and sharp sign, clear enough? Do they need to be moved closer to, or further away from, the note?

- Is there fingering, harmonic signs, stopped note signs or any other feature in very small print linked to the note? If so, what size should they be enlarged to and where is the best place to put them? Fingering is a whole subject of its own, particularly for guitarists where there may be two sets of fingering, one for each hand, plus information about which strings notes are played on.

- Linking back to staves, leger lines. Do these need to be made even thicker than the stave thickness you have selected? Would it help to make them longer, left to right, than in the original?

8.6 Symbols above and below the stave

Consider dynamics.

- For letters and words. Would Arial script be easier than the fancy music "f" and "p" and other letter-based dynamics? Or would it be better to keep them as fancy to be more easily spotted in contrast to tempo markings or lyrics? How big do they need to be? Is it clearer to have them as close to the stave as possible? Are they easier to find if above the stave to which they apply, or below?

- Hairpins showing crescendo and diminuendo. Could the lines be thicker? Could they fan more broadly? Where are they best placed? Notice that the placement of hairpins varies considerably.

Consider lines used for first time and second time bars, dotted lines used for octave ossias, etc. Would it help to have these in thicker lines? Can they be placed somewhere where they are easier to find? Might it help to have a short system to highlight them? Might it help to put them always at the end of a system?

Consider lyrics.

Would it be easier to have just one set of words in the stave and other verses as poetry after the music, with any altered elisions underlined? Is the text easier to follow above or below the stave? What font and boldness is best? Often the whole music layout shifts when adding lyrics so check the spacing of notes after altering lyric text. Is a compromise needed?

8.7   Paper, page turns and print colour

As stated above, this is likely to be for all but the shortest pieces of music something that has to be done manually for each hardcopy piece of music. (In electronic scores, the reader may have an easy means of scrolling such as a foot pedal page turner or software where the notation scrolls as it plays out loud or silently.) Consider how to know which page follows which. Usually this means binding the printed sheets and also placing them in some sort of folder which rests on a stand or is comfortable to hold, if singing or studying, and easy to turn pages. Paper needs to be thick enough not to see through to the reverse page and also to be turned and not wear out. Often cream or yellow paper is more relaxing to read than white printer paper. Some people read music using specific coloured filters. Some people read an inverse, of white notes on a black background (which is costly on printer ink) whilst a few like red coloured notes.

8.8   Relating page layout to musical content

Music is easier to read not only when the symbols and their placement and spacing is considered but also in the correspondence between the musical content and layout. So a piece that is sixteen bars long is often arranged in four-four bar

phrases, one system for each phrase. Having more bar numbers per line than in the original may be helpful so a repeated phrase can be distinguished from the first time it appears. Conversely using more repeat and da capo markings may help keep enlarged music down to a manageable quantity and also reduce page turns.

A description about the structure of a piece often aids students in encouraging them to realise the amount of memorising they have to do is reduced where music repeats. Careful analysis can also show where music subtly deviates from previous similar material.

In music with many rests, such as band parts, again some idea of what is going on during the rests speeds up finding the right place in rehearsal.

9   Complexity and usage

Sometimes very detailed scores are needed and the layers of modification above may complicate the music further. It may be helpful to make a simple score (in one preferred settings style) to get an overall feel of the piece and a second score with all the detail.

Sometimes musicians use different settings for different purposes. So a pianist might use a smaller overall size for learning pieces quickly, such as preparing a straightforward accompaniment swiftly as near to sight reading as is possible, so maximum information is available in each glance but some detail is sacrificed. The same pianist for concert repertoire might however use a much more modified and also generally larger style, where the music is memorised thoroughly with all the detail available in the least physically strenuous layout.

Whilst the heading of this paper refers to large print, a few people require scores making smaller, such as those with tunnel vision,

where making the notes small enough to get several in sight aids fluency.

For some people their eyesight is deteriorating. They may alter their preferred settings as time goes by. Here it is particularly important to keep the various modifications listed in some kind of MSN "recipe" or settings file so they're safely documented.

10 Binding, labelling and storage

Electronic storage is comparatively neat. It may be helpful to include some indication of the overall stave size used, as, for example, in "Handel Adagio 20mm stave".

Hardcopy saving is more tricky. Some people place pieces in plastic folders and then into ring binders. Some have boxes and store loose sheets. Some comb-bind pieces with cardboard covers. Comb binding is particularly helpful as it can be turned almost 360 degrees. On a music stand sometimes comb-bound scores at the top edge particularly of a landscape single sided piece is helpful as the book, if heavy enough on the side facing the reader, can be placed over the top of the stand and the pages flicked over like a flip chart.

Labels may need to include stave size. In the UK, for commercially produced MSN all copyright information needs to appear in the score. For an individual, if a piece in copyright is altered, the original print needs to travel with the MSN version.

11 Saving preferred styles

Once the user has decided all relevant preferences, by making the alterations in the software being used, a template can be created. Save a piece of music with all the modifications. Then remove all the music from the score including time and key signature. Save this new piece, which should be just the stave showing in the

preferred format, as a new manuscript or score format. When creating or importing a new piece, do so in this manuscript or score format and all the contents of the new file should be in the preferred settings. Then all that is needed is to organise the page breaks and to check the density left to right perhaps pushing more bars into some systems or alternatively having more line breaks.

12 Advanced modification

For those wishing to delve into more intricate aspects of modification of stave notation, acquiring an understanding of the art of stave notation itself is advisable. The current reference book in this field is Elaine Gould's "Behind Bars" published by Faber Music in 2011. A warning though. Once inside this fascinating book it may be some time before you come out! In modifying to personal taste, rules and advice from this book can be broken of course but such decisions are then based on knowing accepted practice first.

13 Success

Success is when a musician, who cannot fluently use stave notation as it originally appears, can do so with MSN. Other benefits are independence in being able to use a score without human aid or additional material, along with increased speed of working, which is particularly important for professional musicians and music teachers. If using electronic scores there is also the convenience of storage electronically: gone are the days of endless piles of dog-eared enlarged photocopies, which all look just the same and fall off any normal music stand.

Publicising such success will enable others to gain similar freedom and power. For an example, see the Associated Board of the Royal Schools of Music's magazine Libretto 2013:2 about George Newns, a 97 year old orchestral violinist who used MSN.

14 Where to get further help

UKAAF assists businesses and organisations by advising how to meet the needs of customers and clients with print disabilities; providing guidance on how to source and provide quality accessible formats like large print, audio, braille, electronic file formats and Easy Read; and helping you to understand your responsibilities as a service provider.

Through our website and magazine, members will also gain access to:

- findings from public consultations and end-user research

- research and innovation in accessible formats

- information on suppliers of transcription services

- guidance and advice on standards for accessible formats

- opportunities to review and help to develop standards and guidance.

In addition to supporting service providers and transcribers, UKAAF also represents people with print disabilities. We believe that because format quality matters, end-users should have genuine input into the development of standards for accessible information. By collecting and sharing users' views with service providers and transcribers we can help them to deliver a quality service which meets users' needs.

UKAAF has a User Advisory Group (UAG) so we can include blind and partially sighted people and others with print disabilities in ongoing research and consultation on key accessible format issues.

There are many benefits of being a member of UKAAF, not least to demonstrate your commitment to quality accessible formats. For more information visit us at www.ukaaf.org.

15 Your feedback is welcome

We would welcome your views on this guidance, any suggestions for additions, or case studies of how this guidance has helped you. You might like to share your experience in an article in our magazine 'Format Matters'.

You can phone, email or write to us - our details are at the back, or use the feedback form on our website www.ukaaf.org.

If you find UKAAF's guidance valuable, please encourage others to join by visiting our website.

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