

upper tonic is included in order to show the interval leading to it, even though it is related to the tonic by an octave. The scale for JOY is illustrated.

10. The scales used in the *Sacred Harp* are **heptatonic** (seven-tone), meaning that they consist of seven pitches in a span of one octave, not counting the upper tonic. **Hexatonic** (six-tone) and **pentatonic** (five-tone) scales are regarded as heptatonic scales with gaps in them.

11. The **degrees** of a scale are its successively ascending pitches. The eight degrees spanning one octave are numbered beginning with the tonic as 1, as shown in JOY. Degree 8 is also degree 1 of the next higher octave of the scale. Degree 8 may also be labeled degree 1a ("1 above"). Similarly, degree 1b is one octave below degree 1 and degree 5aa is two octaves above degree 5.

Adjacent degrees of a heptatonic scale are represented by notes at adjacent positions on the staff. Thus, the successive degrees of an ascending scale are represented by notes at successive positions. No position is skipped or repeated. The student should verify this for the scale shown in JOY.

12. Two scales (or **modes**) are recognized in *Sacred Harp* notation, **major** and **minor**. Either scale can be in any key, that is, its tonic can be any letter (natural, flat, or sharp) or pitch. The tonic lends its letter to the name of the key. Thus, "key of E $\flat$  major" denotes the major scale with tonic E $\flat$ , while "key of C $\sharp$  minor" denotes the minor scale with tonic C $\sharp$ .

13. From degree 1 to degree 8, the major scale (Ionian mode) has the syllable sequence Fa-Sol-La-Fa-Sol-La-Mi-Fa and the interval sequence w-w-h-w-w-w-h, with half steps at degrees 3-4 (La-Fa) and 7-8 (Mi-Fa).

C major scale      F major scale      G major scale

Fa Sol La Fa Sol La Mi Fa      Fa Sol La Fa Sol La Mi Fa      Fa Sol La Fa Sol La Mi Fa

1 2 3 4 5 6 7 8      1 2 3 4 5 6 7 8      1 2 3 4 5 6 7 8

The figure illustrates the following principle for the keys of C, F, and G major: *The degrees of a scale have the same shapes, syllables, and relative positions on the staff in every key and under every clef.* The student should study the figure carefully and verify this statement. This is the principle that allows shaped notes to be read by their shapes and relative positions.

The eight notes of JOY are those of a descending major scale. The student can use the pitches of JOY to establish those of the degrees of the major scale. The major scale should be practiced, with the syllables given by the shapes of the notes, until it becomes second nature. With practice, one can learn to sing the correct pitches when presented with the notes of the scale in any order.

14. A **key signature** is a set of flats or sharps at particular positions on the staff. It is placed near the left side of each segment of the staff and at other points if necessary. Each flat or sharp in the key signature affects every note that follows it on the same line or space (until another key signature appears). In JOY, the key signature consists of one flat at B.

The key signature, or its absence, denotes the key by assigning a letter to the syllable Mi. If there is no key signature, Mi is B. When there is one flat, as in JOY, Mi is E. (See Chapter IV.)

Any piece of major music can be noted in any major key. If the key is changed, the notes may move, as a group, up or down on the staff. If one note moves up three positions, then every note moves up three positions, and so do the half- and whole-step intervals between notes at adjacent positions on the staff.

Some pieces would require excessive use of ledger lines if written without a key signature. This is avoided by a proper selection of a key signature.

15. The minor scale printed in the *Sacred Harp* is the natural minor (Aeolian mode). Its syllable and interval sequences are La-Mi-Fa-Sol-La-Fa-Sol-La and w-h-w-w-h-w-w, with half steps at degrees 2-3 and 5-6.

A minor scale      D minor scale      E minor scale

La Mi Fa Sol La Fa Sol La      La Mi Fa Sol La Fa Sol La      La Mi Fa Sol La Fa Sol La

1 2 3 4 5 6 7 8      1 2 3 4 5 6 7 8      1 2 3 4 5 6 7 8

The natural minor scale can be constructed from the major scale by moving the tonic from Fa down to La (Section 19).

Traditionally, minor music is sung in the Dorian mode, with the sixth degree a half step higher than the natural minor notation indicates. The interval sequence is w-h-w-w-w-h-w, with half steps at degrees 2-3 and 6-7 (see Chapter IV, Section 4; and Chapter