

# BASSMOD\_ErrorGetCode

---

Retrieves the BASSMOD error code for the most recent BASSMOD function call.

```
DWORD WINAPI BASSMOD_ErrorGetCode( ) ;
```

## Return value

If no error occurred during the last BASSMOD function call then BASS\_OK is returned, else one of the BASS\_ERROR values is returned. See the function description for an explanation of what the error code means.

Frees all resources used by the digital output, including the MOD music.

```
void WINAPI BASSMOD_Free();
```

## Remarks

BASSMOD\_Free should be called before your program exits. It's not necessary to individually free the MOD music as it is automatically freed by this function.

If you wish to change device settings, having already called [BASSMOD\\_Init](#), then BASSMOD\_Free must be called before calling BASSMOD\_Init again. You will also have to reload the MOD music.

## See also

[BASSMOD\\_Init](#)

Retrieves the current CPU usage of BASSMOD.

```
float WINAPI BASSMOD_GetCPU( );
```

**Return value**

The BASSMOD CPU usage as a percentage of total CPU time.

# BASSMOD\_GetDeviceDescription

---

Retrieves the text description of a device.

```
char *WINAPI BASSMOD_GetDeviceDescription(  
    int devnum  
);
```

## Parameters

devnum The device to get the description of... 0 = first.

## Return value

If succesful, then a pointer to the description is returned, else NULL is returned. Use [BASSMOD\\_ErrorGetCode](#) to get the error code.

## Error codes

BASS\_ERROR\_DEVICE The device number specified is invalid.

## Remarks

This function can be used to enumerate the available devices for a setup dialog.

## Linux notes

This function will always return NULL in the Linux version.

## Example

To get the total number of devices present.

```
int count=0; // the device counter  
while (BASSMOD_GetDeviceDescription(count)) count++;
```

Retrieves the version number of the BASSMOD.DLL that is loaded.

```
DWORD WINAPI BASSMOD_GetVersion();
```

**Return value**

The BASSMOD version (LOWORD.HIWORD)

**Remarks**

There is no guarantee that a previous or future version of BASSMOD supports all the BASSMOD functions that you are using, so you should always call this function to make sure the correct version is loaded.

**Example**

To check that BASSMOD 2.0 is loaded.

```
if (BASSMOD_GetVersion() != MAKELONG(2,0)) {  
    // version 2.0 not loaded!  
}
```

Retrieves the current volume level.

```
int WINAPI BASSMOD_GetVolume( );
```

## Return value

If successful, the volume level is returned, else -1 is returned. Use [BASSMOD\\_ErrorGetCode](#) to get the error code.

## Error codes

BASS_ERROR_INIT	<a href="#">BASSMOD_Init</a> has not been successfully called. This error is also returned when trying to get the volume level of the "no sound" or "decode only" device.
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BASS_ERROR_DRIVER	BASSMOD could not get access to the mixer.
-------------------	--

*Linux only*

## See also

[BASSMOD\\_SetVolume](#)

Initializes BASSMOD.

```
BOOL WINAPI BASSMOD_Init(  
    int device,  
    DWORD freq,  
    DWORD flags  
);
```

## Parameters

**device** The device to use... 0 = first, -1 = default, -2 = no sound, -3 = decode only (see remarks).  
[BASSMOD\\_GetDeviceDescription](#) can be used to get the total number of devices.

**freq** Output sample rate.

**flags** Any combination of these flags.

BASS_DEVICE_8BITS	Use 8 bit resolution, else 16 bit.
BASS_DEVICE_MONO	Use mono, else stereo.
BASS_DEVICE_NOSYNC	Disable synchronizers. If you are not using any syncs, then you may as well use this flag to save a little CPU time. This is automatic when using the "decode only" device.

## Return value

If BASSMOD was successfully initialized then TRUE is returned, else FALSE is returned. Use [BASSMOD\\_ErrorGetCode](#) to get the error code.

## Error codes

BASS_ERROR_ALREADY	BASSMOD has already been initialized. You must call <a href="#">BASSMOD_Free</a> before calling this function again.
BASS_ERROR_DEVICE	The device number specified is invalid.
BASS_ERROR_DRIVER	There is no available device driver... the device may already be in use.
BASS_ERROR_FORMAT	The specified format is not supported by the device. Try changing the <i>freq</i> and <i>flags</i> parameters.
BASS_ERROR_MEM	There is insufficient memory.

## Remarks

This function must be successfully called before calling any other BASSMOD functions, except [BASSMOD\\_ErrorGetCode](#), [BASSMOD\\_GetDeviceDescription](#) and [BASSMOD\\_GetVersion](#).

When using the "decode only" device (*device* = -3), BASSMOD only decodes the sample data (via [BASSMOD\\_MusicDecode](#)), without playing it. This allows the data to be outputted in any way wanted, for example, writing to disk. As no playback (and therefore syncing too) is performed, no decoding or syncing threads are created when using this "device".

## Linux notes

*device* -1 = "/dev/dsp", *device* 0 = "/dev/dsp0", *device* 1 = "/dev/dsp1", etc...

## Example

To initialize BASSMOD, falling back to no sound if no device is available.

```
// try initializing the default device, at 44100hz stereo 16 bits  
if (!BASSMOD_Init(-1,44100,0)) {  
    // couldn't initialize device, so use no sound  
    BASSMOD_Init(-2,44100,0)  
}
```

## See also

[BASSMOD\\_Free](#), [BASSMOD\\_MusicLoad](#), [BASSMOD\\_SetVolume](#)

Sets the digital output master volume.

```
BOOL WINAPI BASSMOD_SetVolume(  
    DWORD volume  
);
```

## Parameters

**volume**    The volume level... 0 (min) - 100 (max).

## Return value

If succesful, then TRUE is returned, else FALSE is returned. Use [BASSMOD\\_ErrorGetCode](#) to get the error code.

## Error codes

**BASS\_ERROR\_INIT**        [BASSMOD\\_Init](#) has not been successfully called. This error is also returned when trying to set the volume level of the "no sound" or "decode only" device.

**BASS\_ERROR\_DRIVER**    BASSMOD could not get access to the mixer.  
*Linux only*

## See also

[BASSMOD\\_GetVolume](#), [BASSMOD\\_MusicSetVolume](#)



Gets decoded sample data from the MOD music.

```
DWORD WINAPI BASSMOD_MusicDecode(  
    void *buffer,  
    DWORD length  
);
```

## Parameters

buffer      Location to write the decoded data.  
length      Number of bytes wanted.

## Return value

If an error occurs, -1 is returned, use [BASSMOD\\_ErrorGetCode](#) to get the error code. If successful, the number of bytes actually decoded will be returned.

## Error codes

BASS\_ERROR\_NOMUSIC    A MOD music has not been loaded.

BASS\_ERROR\_NOTAVAIL   The "decode only" device was not specified in the [BASSMOD\\_Init](#) call.

BASS\_ERROR\_NOPLAY     The MOD music has reached the end.

## Remarks

The returned sample data is in the standard Windows PCM format: 8-bit samples are unsigned, 16-bit samples are signed. There are no intermediate buffers involved, so as much data as is available can be decoded in one go.

## Example

Decode 10000 bytes of sample data.

```
BYTE buf[10000]; // buffer  
BASSMOD_MusicDecode(buf,10000);
```

## See also

[BASSMOD\\_MusicIsActive](#)

Frees the MOD music's resources.

```
void WINAPI BASSMOD_MusicFree();
```

**See also**

[BASSMOD\\_MusicLoad](#)

# BASSMOD\_MusicGetLength

---

Retrieves the length of the MOD music.

```
DWORD WINAPI BASSMOD_MusicGetLength(  
    BOOL playlen  
);
```

## Parameters

**playlen** The length to retrieve... TRUE = the playback length (in bytes), FALSE = the order length.

## Return value

If succesful, then the music's length is returned, else -1 is returned. Use [BASSMOD\\_ErrorGetCode](#) to get the error code.

## Error codes

**BASS\_ERROR\_NOMUSIC** A MOD music has not been loaded.

**BASS\_ERROR\_ILLPARAM** The BASS\_MUSIC\_CALCLEN flag was not used with [BASSMOD\\_MusicLoad](#), or the playback length could not be calculated (the music does not end).

## Example

To start playback of the MOD music from the beginning of the last order.

```
DWORD len=BASSMOD_MusicGetLength(FALSE); // get length  
BASSMOD_MusicPlayEx(MAKELONG(len-1,0),-1,TRUE); // play
```

## See also

[BASSMOD\\_MusicSetPosition](#), [BASSMOD\\_MusicPlayEx](#)

# BASSMOD\_MusicGetName

---

Retrieves the MOD music's name.

```
char *WINAPI BASSMOD_MusicGetName( );
```

## Return value

If succesful, then a pointer to the music's name is returned, else NULL is returned. Use [BASSMOD\\_ErrorGetCode](#) to get the error code.

## Error codes

BASS\_ERROR\_NOMUSIC A MOD music has not been loaded.

# BASSMOD\_MusicGetPosition

---

Retrieves the playback position of the MOD music.

```
DWORD WINAPI BASSMOD_MusicGetPosition();
```

## Return value

If an error occurs, -1 is returned, use [BASSMOD\\_ErrorGetCode](#) to get the error code. If successful, the position is returned as follows... LOWORD = order, HIWORD = row \* scaler (see [BASSMOD\\_MusicSetPositionScaler](#)).

## Error codes

BASS\_ERROR\_NOMUSIC A MOD music has not been loaded.

## See also

[BASSMOD\\_MusicIsActive](#), [BASSMOD\\_MusicSetPosition](#)

# BASSMOD\_MusicGetVolume

---

Retrieves the volume level of a channel or instrument in a MOD music.

```
DWORD WINAPI BASSMOD_MusicGetVolume(  
    DWORD chanins  
);
```

## Parameters

**chanins** The channel or instrument to retrieve the volume of... if the HIWORD is 0, then the LOWORD is a channel number (0 = 1st channel), else the LOWORD is an instrument number (0 = 1st instrument).

## Return value

If succesful, then the requested volume level is returned, else -1 is returned. Use [BASSMOD\\_ErrorGetCode](#) to get the error code.

## Error codes

BASS\_ERROR\_NOMUSIC A MOD music has not been loaded.  
BASS\_ERROR\_NOTAVAIL *chanins* is not valid.

## Remarks

This function can also be used to count the number of channels and instruments in a MOD Music.

## Example

Count the number of channels and instruments in a MOD music.

```
int channels=0,instruments=0;  
while (BASSMOD_MusicGetVolume(channels)!=-1) channels++;  
while (BASSMOD_MusicGetVolume(MAKELONG(instruments,1))!=-1) instruments++;
```

## See also

[BASSMOD\\_MusicSetVolume](#)

Checks if the MOD music is active (playing).

```
DWORD WINAPI BASSMOD_MusicIsActive();
```

## Return value

The return value is one of the following.

BASS_ACTIVE_STOPPED	The MOD music is not active.
BASS_ACTIVE_PLAYING	The MOD music is playing.
BASS_ACTIVE_PAUSED	The MOD music is paused.

## Remarks

When using the "decode only" device, BASS\_ACTIVE\_PLAYING will be returned until the end of the MOD music is reached, when BASS\_ACTIVE\_STOPPED will be returned.

Loads a MOD music.

```
BOOL WINAPI BASSMOD_MusicLoad(  
    BOOL mem,  
    void *file,  
    DWORD offset,  
    DWORD length,  
    DWORD flags  
);
```

## Parameters

mem	TRUE = load the MOD music from memory.
file	Filename (mem = FALSE) or a memory location (mem = TRUE).
offset	File offset to load the MOD music from (only used if mem = FALSE).
length	Data length (only used if mem = FALSE)... 0 = use all data up to the end of file. If <i>length</i> over-runs the end of the file, it'll automatically be lowered to the end of the file.
flags	A combination of these flags. <div><div>BASS_MUSIC_LOOP</div><div>Loop the music.</div><div>BASS_MUSIC_RAMP</div><div>Use "normal" ramping (as used in FastTracker 2).</div><div>BASS_MUSIC_RAMPS</div><div>Use "sensitive" ramping.</div><div>BASS_MUSIC_NONINTER</div><div>Use non-interpolated mixing. This generally reduces the sound quality, but can be good for chip-tunes.</div><div>BASS_MUSIC_FT2MOD</div><div>Play .MOD file as FastTracker 2 would.</div><div>BASS_MUSIC_PT1MOD</div><div>Play .MOD file as ProTracker 1 would.</div><div>BASS_MUSIC_POSRESET</div><div>Stop all notes when moving position (using <a href="#">BASSMOD_MusicSetPosition</a> or <a href="#">BASSMOD_MusicPlayEx</a>).</div><div>BASS_MUSIC_SURROUND</div><div>Apply XMPlay's surround sound to the music (ignored in mono).</div><div>BASS_MUSIC_SURROUND2</div><div>Apply XMPlay's surround sound mode 2 to the music (ignored in mono).</div><div>BASS_MUSIC_STOPBACK</div><div>Stop the music when a backward jump effect is played. This stops musics that never reach the end from going into endless loops. Some MOD musics are designed to jump all over the place, so this flag would cause those to be stopped prematurely. If this flag is used together with the BASS_MUSIC_LOOP flag, then the music would not be stopped but any BASS_SYNC_END sync would be called.</div><div>BASS_MUSIC_CALCLEN</div><div>Calculate the playback length of the music. This also slightly increases the time taken to load the music, depending on how long it is. Use <a href="#">BASSMOD_MusicGetLength</a> to retrieve the calculated length. Note that it's not always possible to calculate a length because some musics never actually reach an end.</div><div>BASS_MUSIC_NOSAMPLE</div><div>Don't load the music's samples. This slightly reduces the time taken to load the music, which is useful if you just want to get the name and length of the music without playing it.</div><div>BASS_UNICODE</div><div><i>Win32 only</i> file is a Unicode (16-bit characters) filename.</div></div>

## Return value

If successful, then TRUE is returned, else FALSE is returned. Use [BASSMOD\\_ErrorGetCode](#) to get the error code.

## Error codes

BASS_ERROR_INIT	<a href="#">BASSMOD_Init</a> has not been successfully called.
BASS_ERROR_ALREADY	A MOD music has already been loaded, you must call <a href="#">BASSMOD_MusicFree</a> first.
BASS_ERROR_FILEOPEN	The file could not be opened.
BASS_ERROR_FILEFORM	The file's format is not recognised/supported.
BASS_ERROR_MEM	There is insufficient memory.

## Remarks

BASS uses the same code as XMPlay for it's MOD music support, giving the most accurate reproduction of IT / XM / S3M / MTM / MOD / UMX files available from any sound system.

Ramping doesn't take a lot of extra processing and improves the sound quality by removing "clicks". Sensitive ramping leaves sharp attacked samples, while normal ramping can cause them to lose a bit of their impact. Generally, normal ramping is recommended for XMs, and sensitive ramping for the other formats. But, some XMs may also sound better using sensitive ramping.



When loading a MOD music from memory, BASS does not use the memory after it's loaded the MOD music. So you can do whatever you want with the memory after calling this function.

**PocketPC notes**

All filenames are Unicode on PocketPC, so *file* is always Unicode (if not loading from memory).

**See also**

[BASSMOD\\_MusicDecode](#), [BASSMOD\\_MusicFree](#), [BASSMOD\\_MusicGetLength](#), [BASSMOD\\_MusicGetName](#), [BASSMOD\\_MusicPlay](#), [BASSMOD\\_MusicPlayEx](#), [BASSMOD\\_MusicSetAmplify](#), [BASSMOD\\_MusicSetPanSep](#), [BASSMOD\\_MusicSetPositionScaler](#), [BASSMOD\\_MusicSetSync](#)

# BASSMOD\_MusicPause

---

Pauses the MOD music.

```
BOOL WINAPI BASSMOD_MusicPause( ) ;
```

## Return value

If successful, TRUE is returned, else FALSE is returned. Use [BASSMOD\\_ErrorGetCode](#) to get the error code.

## Error codes

BASS\_ERROR\_NOPLAY    The MOD music is not playing.

## Remarks

Use [BASSMOD\\_MusicPlay](#) to resume playback. [BASSMOD\\_MusicStop](#) can be used to stop the paused MOD music.

## Linux notes

Pausing is not instantaneous in the Linux version.

## See also

[BASSMOD\\_MusicPlay](#), [BASSMOD\\_MusicStop](#)

Plays the MOD music.

```
BOOL WINAPI BASSMOD_MusicPlay( );
```

## Return value

If successful, TRUE is returned, else FALSE is returned. Use [BASSMOD\\_ErrorGetCode](#) to get the error code.

## Error codes

BASS\_ERROR\_NOMUSIC A MOD music has not been loaded.

## Remarks

Playback continues from where it was last stopped or paused. If the MOD music has just been loaded, then playback starts from the beginning.

## See also

[BASSMOD\\_MusicGetPosition](#), [BASSMOD\\_MusicIsActive](#), [BASSMOD\\_MusicPause](#), [BASSMOD\\_MusicStop](#), [BASSMOD\\_MusicLoad](#), [BASSMOD\\_MusicPlayEx](#)

Plays the MOD music, using the specified start position and flags.

```
BOOL WINAPI BASSMOD_MusicPlayEx(  
    DWORD pos,  
    int flags,  
    BOOL reset  
);
```

## Parameters

- pos** Position to start playback from... LOWORD = order, HIWORD = row. If HIWORD = 0xFFFF, then LOWORD = position in seconds. If LOWORD and HIWORD are both 0xFFFF, then the position is left unchanged. Setting the position in seconds requires that the BASS\_MUSIC\_CALCLEN flag was used when the MOD music was loaded.
- flags** Override the MOD music's current flags... -1 = use current flags, else a combination of these flags.
- BASS\_MUSIC\_LOOP Loop the music.
  - BASS\_MUSIC\_RAMP Use "normal" ramping (as used in FastTracker 2).
  - BASS\_MUSIC\_RAMPS Use "sensitive" ramping.
  - BASS\_MUSIC\_NONINTER Use non-interpolated mixing. This generally reduces the sound quality, but can be good for chip-tunes.
  - BASS\_MUSIC\_FT2MOD Play .MOD file as FastTracker 2 would.
  - BASS\_MUSIC\_PT1MOD Play .MOD file as ProTracker 1 would.
  - BASS\_MUSIC\_POSRESET Stop all notes when moving position (using [BASSMOD\\_MusicSetPosition](#) or this function).
  - BASS\_MUSIC\_SURROUND Apply XMPlay's surround sound to the music (ignored in mono).
  - BASS\_MUSIC\_SURROUND2 Apply XMPlay's surround sound mode 2 to the music (ignored in mono).
  - BASS\_MUSIC\_STOPBACK Stop the music when a backward jump effect is played. This stops musics that never reach the end from going into endless loops. Some MOD musics are designed to jump all over the place, so this flag would cause those to be stopped prematurely.
- reset** TRUE = Stop all playing notes and reset BPM, etc... This is ignored if not also setting the position.

## Return value

If successful, TRUE is returned, else FALSE is returned. Use [BASSMOD\\_ErrorGetCode](#) to get the error code.

## Error codes

- BASS\_ERROR\_NOMUSIC A MOD music has not been loaded.
- BASS\_ERROR\_DECODE The "decode only" device is being used, so the MOD music is not playable (*pos* must be -1).
- BASS\_ERROR\_POSITION *pos* is invalid.

## Remarks

When the position is left unchanged (*pos* = -1), this function does not start the music playing, but it will continue playing if it is already. This allows a music's *flags* (ramping, etc...) to be changed at any time.

## Example

To reset and start playback of the MOD music at row 10 of order 5.

```
BASSMOD_MusicPlayEx(MAKELONG(5,10), -1, TRUE);
```

## See also

[BASSMOD\\_MusicGetPosition](#), [BASSMOD\\_MusicIsActive](#), [BASSMOD\\_MusicPause](#), [BASSMOD\\_MusicStop](#), [BASSMOD\\_MusicGetLength](#), [BASSMOD\\_MusicLoad](#), [BASSMOD\\_MusicPlay](#)

# BASSMOD\_MusicRemoveSync

---

Removes a synchronizer from the MOD music.

```
BOOL WINAPI BASSMOD_MusicRemoveSync(  
    HSYNC sync  
);
```

## Parameters

`sync`      Handle of the synchronizer to remove.

## Return value

If succesful, TRUE is returned, else FALSE is returned. Use [BASSMOD\\_ErrorGetCode](#) to get the error code.

## Error codes

BASS\_ERROR\_NOMUSIC    A MOD music has not been loaded.

BASS\_ERROR\_HANDLE    *sync* is not valid.

## See also

[BASSMOD\\_MusicSetSync](#), [SYNCPROC callback](#)

# BASSMOD\_MusicSetAmplify

---

Sets the MOD music's amplification level.

```
BOOL WINAPI BASSMOD_MusicSetAmplify(  
    DWORD amp  
);
```

## Parameters

*amp*      Amplification level... 0 (min) - 100 (max)... the default when a MOD music is loaded is 50.

## Return value

If succesful, then TRUE is returned, else FALSE is returned. Use [BASSMOD\\_ErrorGetCode](#) to get the error code.

## Error codes

BASS\_ERROR\_NOMUSIC   A MOD music has not been loaded.

## Remarks

As the amplification level get's higher, the sample data's range increases, and therefore, the resolution increases. But if the level is set too high, then clipping can occur, which can result in distortion of the sound.

## See also

[BASSMOD\\_MusicSetPanSep](#)

# BASSMOD\_MusicSetPanSep

---

Sets the MOD music's pan separation level.

```
BOOL WINAPI BASSMOD_MusicSetPanSep(  
    DWORD pan  
);
```

## Parameters

*pan* Pan separation... 0 (min) - 100 (max), 50 = linear (which is the default when a MOD music is loaded).

## Return value

If succesful, then TRUE is returned, else FALSE is returned. Use [BASSMOD\\_ErrorGetCode](#) to get the error code.

## Error codes

BASS\_ERROR\_NOMUSIC A MOD music has not been loaded.

## Remarks

By default BASSMOD uses a linear panning "curve". If you want to use the panning of FT2, use a pan separation setting of around 35. To use the Amiga panning (ie. full left and right) set it to 100.

## See also

[BASSMOD\\_MusicSetAmplify](#)

# BASSMOD\_MusicSetPosition

---

Sets the playback position of the MOD music.

```
BOOL WINAPI BASSMOD_MusicSetPosition(  
    DWORD pos  
);
```

## Parameters

**pos**      The position... LOWORD = order, HIWORD = row. If HIWORD = 0xFFFF, then LOWORD = position in seconds. Setting the position in seconds requires that the BASS\_MUSIC\_CALCLEN flag was used when the MOD music was loaded.

## Return value

If succesful, then TRUE is returned, else FALSE is returned. Use [BASSMOD\\_ErrorGetCode](#) to get the error code.

## Error codes

BASS\_ERROR\_NOMUSIC    A MOD music has not been loaded.  
BASS\_ERROR\_POSITION    The requested position is illegal.

## Remarks

When the BASS\_MUSIC\_POSRESET flag is active, all notes that were playing before the position changed will be stopped. Otherwise, the notes will continue playing until they are stopped in the MOD music. When setting the position in seconds, the BPM & tempo are updated to what they would normally be at the new position. Otherwise they are left as they were prior to the postion change.

## Example

To set the position of the MOD music to row 20 of order 10.

```
BASSMOD_MusicSetPosition(MAKELONG(10,20));
```

## See also

[BASSMOD\\_MusicGetPosition](#), [BASSMOD\\_MusicIsActive](#), [BASSMOD\\_MusicGetLength](#)



# BASSMOD\_MusicSetPositionScaler

---

Sets the MOD music's [BASSMOD\\_MusicGetPosition](#) scaler.

```
BOOL WINAPI BASSMOD_MusicSetPositionScaler(  
    DWORD scale  
);
```

## Parameters

**scale**      The scaler... 1 (min) - 256 (max)... the default when a MOD music is loaded is 1.

## Return value

If succesful, then TRUE is returned, else FALSE is returned. Use [BASSMOD\\_ErrorGetCode](#) to get the error code.

## Error codes

**BASS\_ERROR\_NOMUSIC** A MOD music has not been loaded.

## Remarks

When you call [BASSMOD\\_MusicGetPosition](#), the row (HIWORD) will be scaled by this value. By using a higher scaler, you can get a more precise position indication.

## Example

To get the position of the MOD music accurate to within a 10th of a row.

```
DWORD pos,order,row,row10th;  
BASSMOD_MusicSetPositionScaler(10); // set the scaler  
pos=BASSMOD_MusicGetPosition();  
order=LOWORD(pos); // the order  
row=HIWORD(pos)/10; // the row  
row10th=HIWORD(pos)%10; // the 10th of a row
```

## See also

[BASSMOD\\_MusicGetPosition](#)

Sets up a synchronizer on the MOD music.

```
HSYNC WINAPI BASSMOD_MusicSetSync(  
    DWORD type,  
    DWORD param,  
    SYNCPROC *proc,  
    DWORD user  
);
```

## Parameters

**type** The type of sync... see the table below. If you want the sync to occur only once, then also use the `BASS_SYNC_ONETIME` flag.

**param** The sync parameters, depends on the sync *type*... see the table below.

**proc** The callback function.

**user** User instance data to pass to the callback function.

**Sync types**, with **param** and [SYNCPROC](#) **data** definitions.

<code>BASS_SYNC_POS</code>	Sync when the music reaches a position. <b>param</b> : LOWORD = order (0=first, -1=all), HIWORD = row (0=first, -1=all). <b>data</b> : LOWORD = order, HIWORD = row.
<code>BASS_SYNC_END</code>	Sync when the music reaches the end. Note that some MOD musics never reach the end, they may jump to another position first. If the <code>BASS_MUSIC_STOPBACK</code> flag is used with a MOD music (through <a href="#">BASSMOD_MusicLoad</a> or <a href="#">BASSMOD_MusicPlayEx</a> ), then this sync will also be called when a backward jump effect is played. <b>param</b> : not used. <b>data</b> : 1 = the sync is triggered by a backward jump in a MOD music, otherwise not used.
<code>BASS_SYNC_MUSICINST</code>	Sync when an instrument (sample for the MOD/S3M/MTM formats) is played (not including retrigs). <b>param</b> : LOWORD = instrument (1=first), HIWORD = note (0=c0...119=b9, -1=all). <b>data</b> : LOWORD = note, HIWORD = volume (0-64).
<code>BASS_SYNC_MUSICFX</code>	Sync when the sync effect is used. The sync effect is <code>E8x</code> or <code>Wxx</code> for the XM/MTM/MOD formats, and <code>S2x</code> for the IT/S3M formats (where x = any value). <b>param</b> : 0 = the position is passed to the callback ( <b>data</b> : LOWORD = order, HIWORD = row), 1 = the value of x is passed to the callback ( <b>data</b> : x value).

## Return value

If succesful, then the new synchronizer's handle is returned, else 0 is returned. Use [BASSMOD\\_ErrorGetCode](#) to get the error code.

## Error codes

<code>BASS_ERROR_NOMUSIC</code>	A MOD music has not been loaded.
<code>BASS_ERROR_NOSYNC</code>	Syncs are disabled, due to the <code>BASS_DEVICE_NOSYNC</code> flag being used in the <a href="#">BASSMOD_Init</a> call.
<code>BASS_ERROR_ILLPARAM</code>	An illegal <i>param</i> was specified.
<code>BASS_ERROR_ILLTYPE</code>	An illegal <i>type</i> was specified.

## Remarks

Multiple synchronizers may be used. Use [BASSMOD\\_MusicRemoveSync](#) to remove a synchronizer. If the `BASS_SYNC_ONETIME` flag is used, then the sync is automatically removed after it's occurred (ie. there's no need to remove it manually).

The MOD music does not have to be playing to set a synchronizer, you can set synchronizers before or while playing the music. Equally, you can also remove synchronizers at any time.

## Example

Do some processing until the MOD music reaches the 10th order.

```
BOOL order10=FALSE; // the order 10 flag  
...  
// the sync callback  
void CALLBACK MySyncProc(HSYNC handle, DWORD data, DWORD user) {
```

```
    order10=TRUE; // set the order 10 flag
}
...
BASS_MusicSetSync(BASS_SYNC_POS|BASS_SYNC_ONETIME, MAKELONG(10,0), &MySyncProc, 0); //
set the one-time order 10 sync
while (!order10) {
    // order 10 has not arrived, so do some processing
}
// order 10 has arrived!
```

**See also**

[BASSMOD\\_MusicRemoveSync](#), [SYNCPROC](#) callback

# BASSMOD\_MusicSetVolume

---

Sets the volume level of a channel or instrument in a MOD music.

```
BOOL WINAPI BASSMOD_MusicSetVolume(  
    DWORD chanins,  
    DWORD volume  
);
```

## Parameters

**chanins** The channel or instrument to set the volume of... if the HIWORD is 0, then the LOWORD is a channel number (0 = 1st channel), else the LOWORD is an instrument number (0 = 1st instument).  
**volume** The volume level... 0 (min) - 100 (max).

## Return value

If succesful, then TRUE is returned, else FALSE is returned. Use [BASSMOD\\_ErrorGetCode](#) to get the error code.

## Error codes

BASS\_ERROR\_NOMUSIC A MOD music has not been loaded.  
BASS\_ERROR\_NOTAVAIL *chanins* is not valid.  
BASS\_ERROR\_ILLPARAM *volume* is not valid.

## Remarks

The effect of changes made with this function are not heard instantaneously, due to buffering. The volume level of all channels and instruments is initially 100. For MOD formats that do not use instruments, read "sample" for "instrument".

## See also

[BASSMOD\\_MusicGetVolume](#), [BASSMOD\\_MusicSetAmplify](#)

Stops the MOD music.

```
BOOL WINAPI BASSMOD_MusicStop( );
```

## Return value

If successful, TRUE is returned, else FALSE is returned. Use [BASSMOD\\_ErrorGetCode](#) to get the error code.

## Error codes

BASS\_ERROR\_NOMUSIC A MOD music has not been loaded.

## See also

[BASSMOD\\_MusicPlay](#), [BASSMOD\\_MusicPlayEx](#)

User defined synchronizer callback function.

```
void CALLBACK YourSyncProc(  
    HSYNC handle,  
    DWORD data  
    DWORD user  
);
```

## Parameters

**handle**     The sync that has occurred.  
**data**       Additional data associated with the sync's occurrence.  
**user**       The user instance data given when [BASSMOD\\_MusicSetSync](#) was called.

## Remarks

A sync callback function should be very quick as other syncs can't be processed until it has finished.

## See also

[BASSMOD\\_MusicSetSync](#)