



## Service and Support

### Converting a MIDI Sequence into a WAV File using Yamaha XG Works 3.0

There are two basic ways of converting a MIDI sequence into a digital audio WAV file using Yamaha XG Works 3.0.

*NOTE: These basic procedures can also apply to most audio software applications.*

#### **Table of Contents**

**I) Simultaneously Playing Back a MIDI Sequence from XG Works to a Yamaha MIDI Instrument and Recording the Audio Signal from the Yamaha MIDI Instrument to an Audio Track in XG Works:** In this situation, the MIDI data is being transmitted from XG Works to the Yamaha MIDI instrument. The Yamaha MIDI instrument plays the MIDI sequence and sends an audio signal to the computer. An audio track in XG Works captures the audio signal as digital audio data. Then, the digital audio data can be stored as a WAV file.

#### **Sub Headings**

- Windows Setup
- XG Works System Setup
- Audio Recording
- Exporting the Audio Track to a WAV File


**II) Simultaneously Playing Back a MIDI Sequence on a Yamaha MIDI Instrument and Recording the Audio Signal from the Yamaha MIDI Instrument to an Audio Track in XG Works:** In this situation, the MIDI sequence resides on the Yamaha MIDI instrument in an internal memory or on a floppy disk or a SmartMedia card. The Yamaha MIDI instrument plays the MIDI sequence and sends an audio signal to the computer. An audio track in XG Works captures the audio signal as digital audio data. Then, the digital audio data can be stored as a WAV file.

#### **Sub Headings**

- Windows Setup
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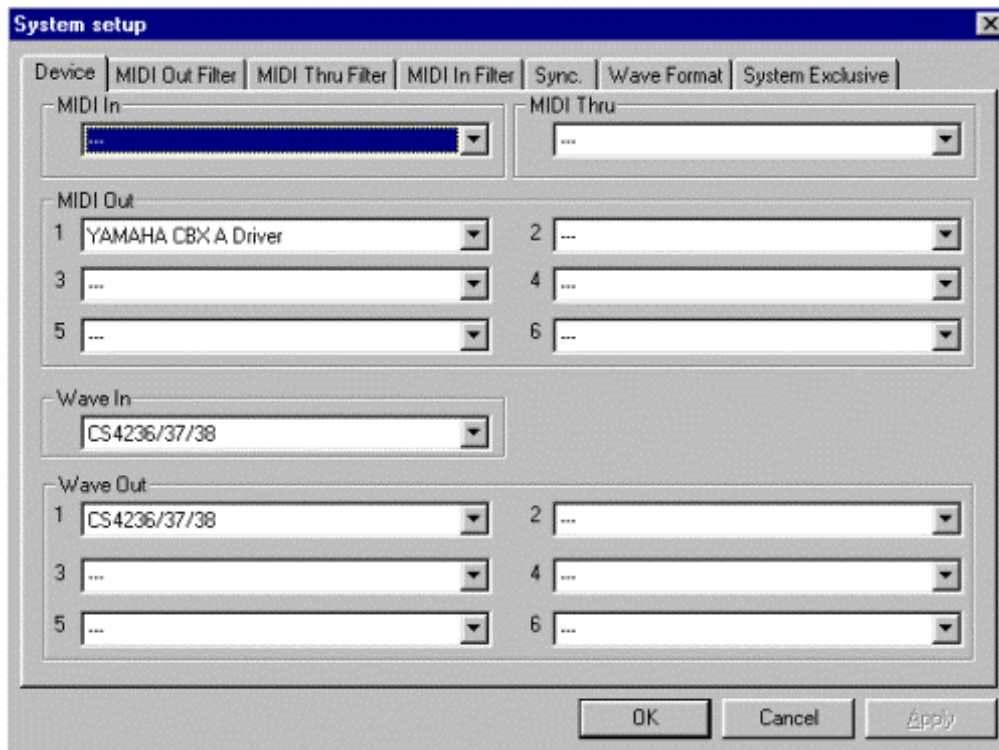
**I) Simultaneously Playing Back a MIDI Sequence from XG Works to the Yamaha MIDI Instrument and Recording the Audio Signal from a Yamaha MIDI Instrument to an Audio Track in XG Works**

**Windows Setup:**

- 1) Double-click the Windows 'Volume' icon . The 'Master Volume' window will be displayed.
- 2) Click on 'Options'.
- 3) Select 'Properties'.
- 4) Under 'Adjust volume for', click 'Recording'.
- 5) Under 'Show the following volume controls:' click 'Line In'
- 6) Click the <OK> button. The 'Recording Control' window will be displayed.
- 7) Under the 'Line In' fader control, click in the selection box next to 'Select'.
- 8) Adjust the 'Line In' fader control to a little over halfway towards maximum. If necessary, this setting can be adjusted again later. The 'Recording Control' window may be left active for making further adjustments.

**XG Works System Setup:**

- 1) Launch XG Works
- 2) Type "CTRL-U" to display the System Setup screen.



3) Select the 'MIDI OUT', 'WAVE IN' and 'WAVE OUT' drivers.

a) Click on the 'MIDI OUT', 'WAVE IN' or 'WAVE OUT' field to display the driver options that are available for that particular field.

b) Select a driver option to change the setting for any particular field.

1] For MIDI drivers, the following options should work: **Yamaha CBX, MPU-401 or SB MIDI.**

2] For WAVE drivers, the default drivers should work as long as there is only one sound card installed in the system.

*NOTE: The MIDI IN driver is not required to complete this procedure.*

4) Select the 'Wave Format' parameters.

a) Click on the 'Wave Format' tab.

b) Select '44.100kHz, Stereo, 16Bit'.

**IMPORTANT:** Selecting '44.100kHz, Stereo, 16Bit' is required to write an Audio CD.

## Audio Recording:

1) Load the MIDI sequence into XG Works.

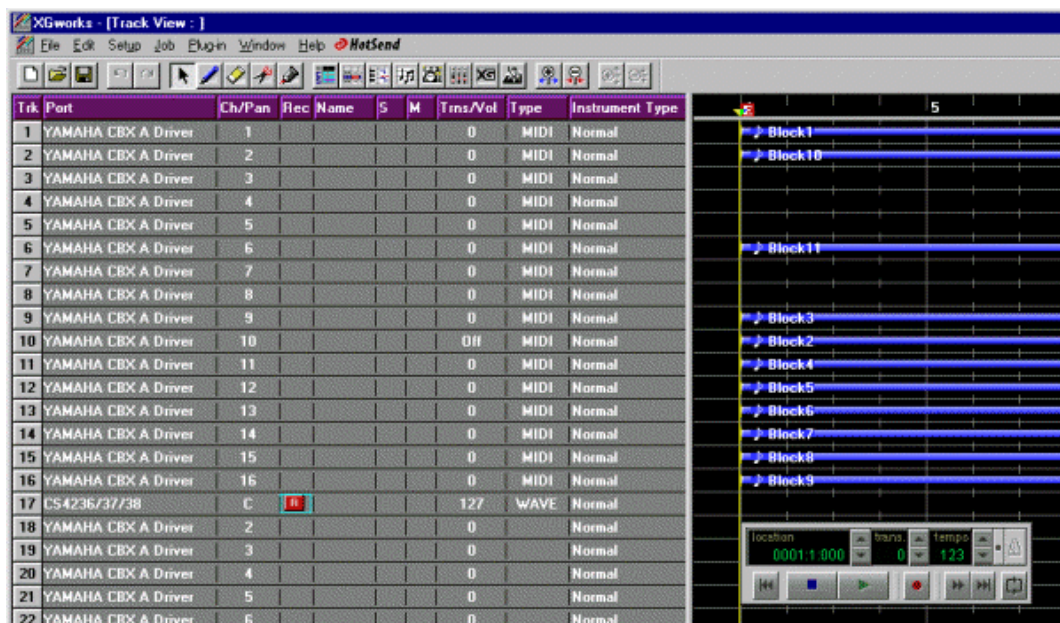
a) Select the 'File' menu option from the main menu bar.

b) Select 'Open'

c) Select the MIDI sequence, xxxxx.MID file.

*NOTE: If the MIDI sequence was created using XG Works, the file might also have the extension .XWS depending on how the file was originally saved. XWS is the file extension of an XG Works file.*

2) Configure an unused Track for audio recording.



a) Record-enable the selected Track.

1] Click on the field in the 'REC' column. The field will display a red 'R'.

b) Set the Record Type to 'WAVE'.

1] Click on the field in the 'TYPE' column.

2] Select 'WAVE'.

c) Set the Panning to 'C' (Center).

1] Click on the field in the 'Ch/Pan' column.

2] Click repeatedly on the up arrow button until 'C' is selected.

3) Click the <RECORD> button.

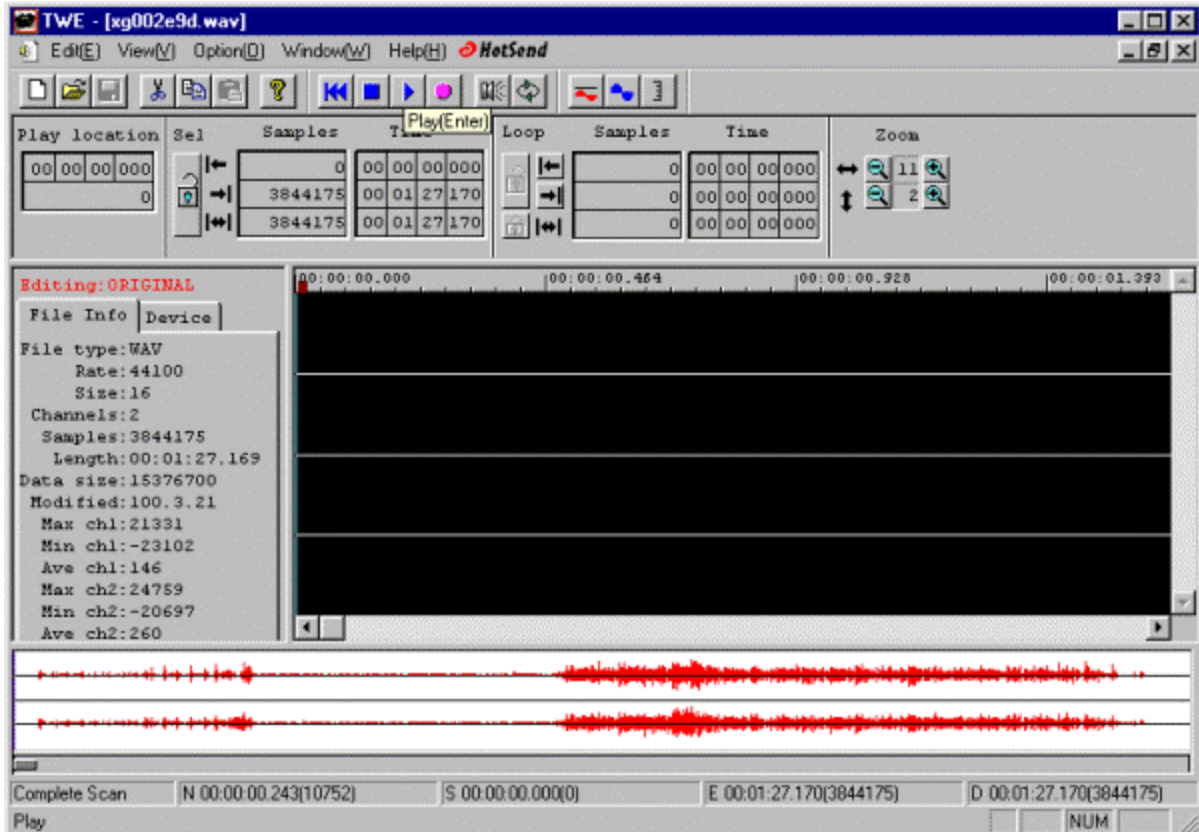
4) Click the <PLAY> button to start recording. The MIDI sequence data will be sent to the MIDI instrument and the audio track in XG Works will capture the audio signal sent from the MIDI instrument. Figure 3 shows the sound data in RED after it has been recorded to the audio track. This indicates that the sound data is automatically selected for editing and exporting.

The screenshot displays the XGworks software interface. On the left, a track list table is visible with columns: Trk, Port, Ch/Pan, Rec, Name, S, M, Tms/Vol, Type, and Instrument Type. Track 17 is highlighted in red, indicating it is the active track. The 'Rec' column for track 17 contains a red 'R', and the 'Type' column contains 'WAVE'. The 'Ch/Pan' column for track 17 contains 'C'. On the right, a piano roll view shows a timeline with various blocks (Block1 through Block12) and a control panel at the bottom with buttons for location, trans, and tempo.

Trk	Port	Ch/Pan	Rec	Name	S	M	Tms/Vol	Type	Instrument Type
1	YAMAHA CBX A Driver	1					0	MIDI	Normal
2	YAMAHA CBX A Driver	2					0	MIDI	Normal
3	YAMAHA CBX A Driver	3					0	MIDI	Normal
4	YAMAHA CBX A Driver	4					0	MIDI	Normal
5	YAMAHA CBX A Driver	5					0	MIDI	Normal
6	YAMAHA CBX A Driver	6					0	MIDI	Normal
7	YAMAHA CBX A Driver	7					0	MIDI	Normal
8	YAMAHA CBX A Driver	8					0	MIDI	Normal
9	YAMAHA CBX A Driver	9					0	MIDI	Normal
10	YAMAHA CBX A Driver	10					Off	MIDI	Normal
11	YAMAHA CBX A Driver	11					0	MIDI	Normal
12	YAMAHA CBX A Driver	12					0	MIDI	Normal
13	YAMAHA CBX A Driver	13					0	MIDI	Normal
14	YAMAHA CBX A Driver	14					0	MIDI	Normal
15	YAMAHA CBX A Driver	15					0	MIDI	Normal
16	YAMAHA CBX A Driver	16					0	MIDI	Normal
17	C5 4236/37/38	C	R				127	WAVE	Normal
18	YAMAHA CBX A Driver	2					0	Normal	
19	YAMAHA CBX A Driver	3					0	Normal	
20	YAMAHA CBX A Driver	4					0	Normal	
21	YAMAHA CBX A Driver	5					0	Normal	
22	YAMAHA CBX A Driver	6					0	Normal	

## Exporting the Audio Track to a WAV File:


- 1) Click the 'Job' menu option from the main menu bar.
- 2) Select 'WAV Editor TWE'. The 'Select Working Dir#' window will appear on the computer display.
- 3) Select the directory where the file is to be stored and click the <OK> button. The audio track will be imported into the TWE (Tiny WAV Editor) program.
- 4) Type "CTRL-A" to select the audio data. Figure 4 shows a TWE editor with the imported audio data selected.



- 5) Save the audio data as a WAV file.
  - a) Type "CTRL-S" to open the 'Save' window.
  - b) Type in a name for the recording.
  - c) Select 'WAV' for the 'File Type'.
  - d) Click <OK> to complete the conversion.

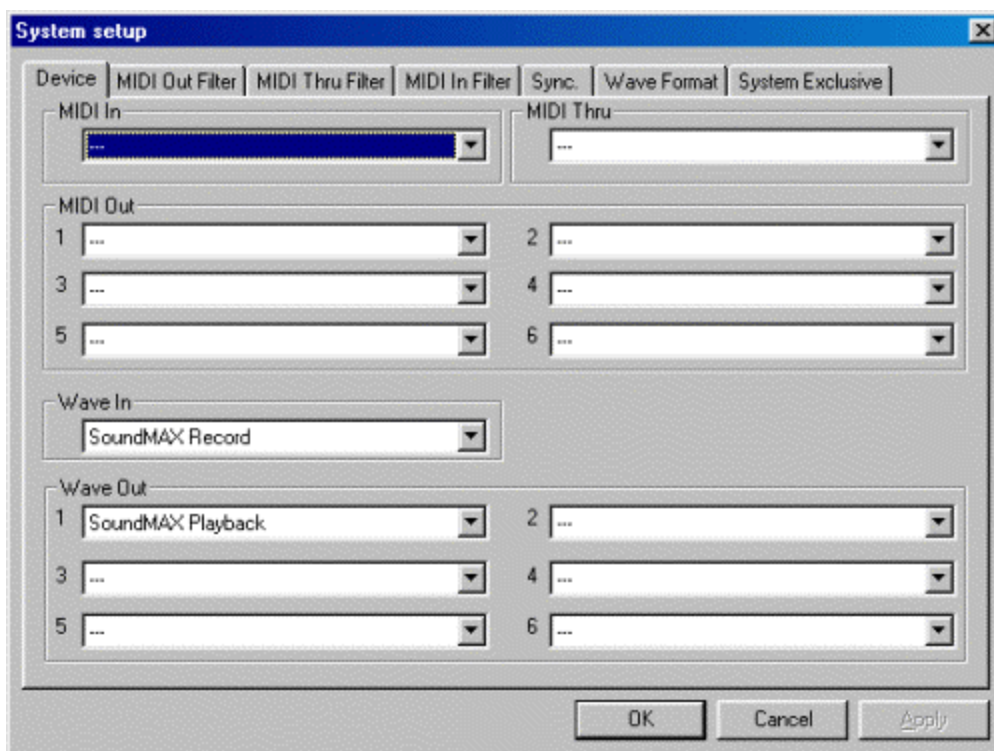
## II) Simultaneously Playing Back a MIDI Sequence on a Yamaha MIDI Instrument and Recording the Audio Signal from the Yamaha MIDI Instrument to an Audio Track in XG Works

### Windows Setup:

- 1) Double-click the Windows 'Volume' icon . The 'Master Volume' window will be displayed.
- 2) Click on 'Options'.
- 3) Select 'Properties'.
- 4) Under 'Adjust volume for', click 'Recording'.
- 5) Under 'Show the following volume controls:' click 'Line In'
- 6) Click the <OK> button. The 'Recording Control' window will be displayed.
- 7) Under the 'Line In' fader control, click in the selection box next to 'Select'.
- 8) Adjust the 'Line In' fader control to a little over halfway towards maximum. If necessary, this setting can be adjusted again later. The 'Recording Control' window may be left active for making further adjustments.

### XG Works System Setup:

- 1) Launch XG Works
- 2) Type "CTRL-U" to display the System Setup screen.



3) Select the 'WAVE IN' driver.

a) Click on the WAVE IN field to display the driver options that are available for that particular field.

b) Select a driver option to change the setting for any particular field.

*NOTE: It is not necessary to select any MIDI drivers for this procedure. Only the 'WAV IN' audio driver required.*

4) Select the 'Wave Format' parameters.

a) Click on the 'Wave Format' tab.

b) Select '44.100kHz, Stereo, 16Bit'.

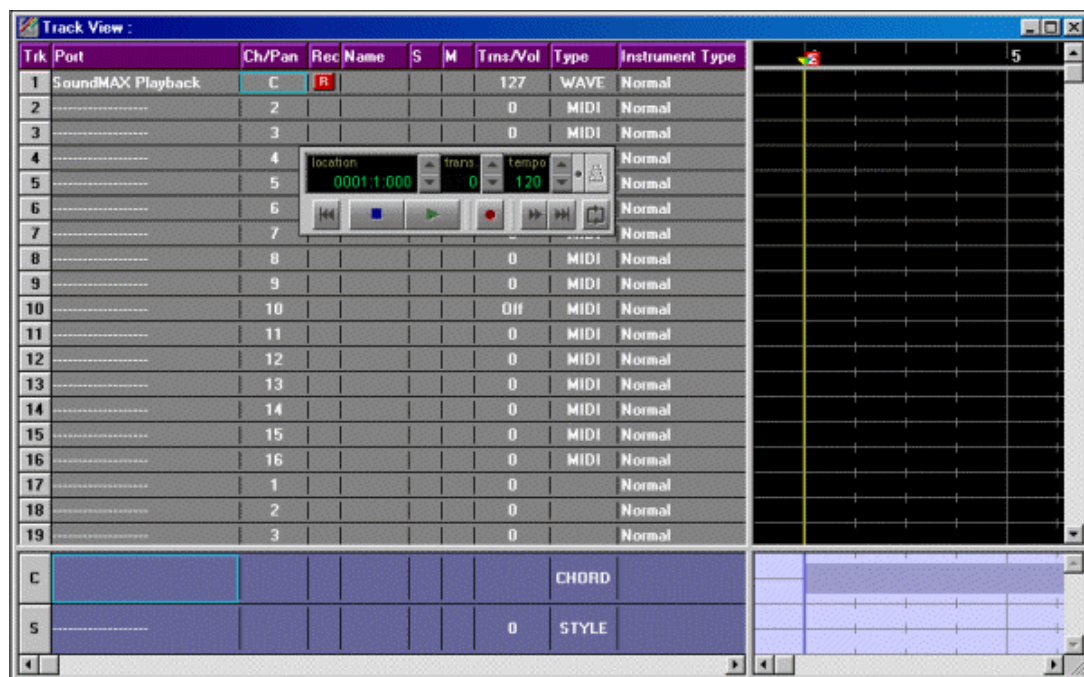
**IMPORTANT:** Selecting '44.100kHz, Stereo, 16Bit' is required to write an Audio CD.

### Audio Recording:

1) Set the MIDI sequence so that it is ready to be played back on the Yamaha MIDI instrument.

*NOTE: This may involve selecting an internal Song memory on the Yamaha MIDI instrument or selecting a Song from a floppy diskette or SmartMedia card that has been inserted into the Yamaha MIDI instrument.*

2) Configure an unused Track for audio recording.



a) Record-enable the selected Track.

1] Click on the field in the 'REC' column. The field will display a red 'R'.

b) Set the Record Type to 'WAVE'.

- 1] Click on the field in the 'TYPE' column.
- 2] Select 'WAVE'.

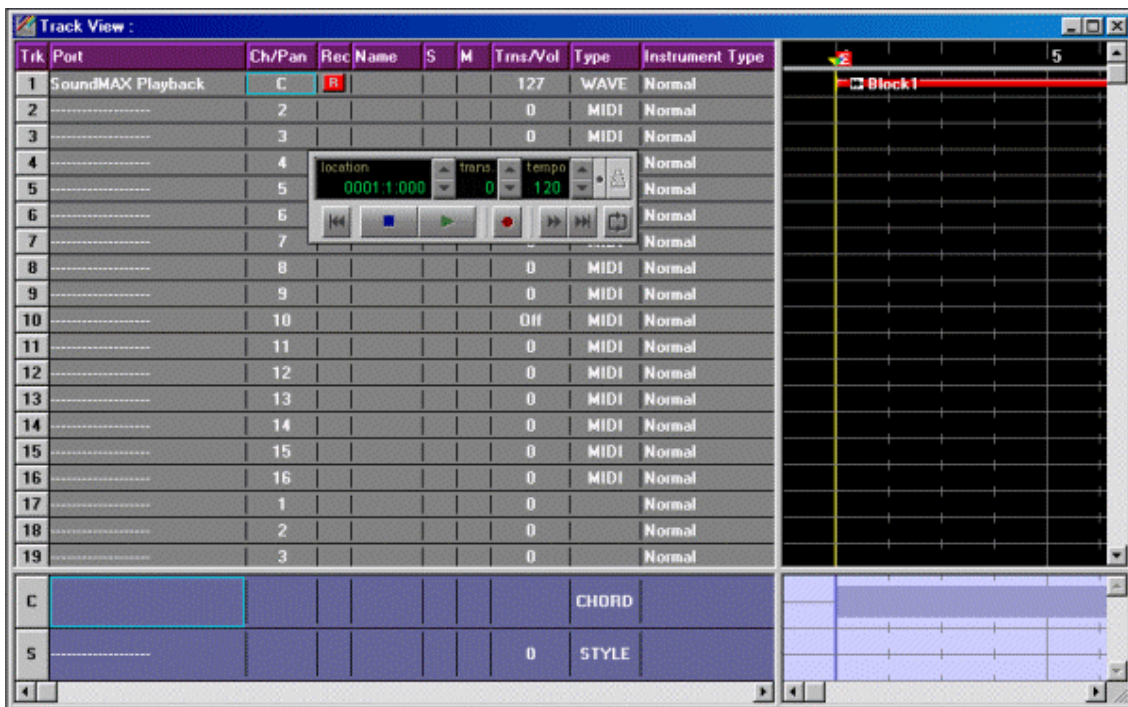
c) Set the Panning to 'C' (Center).

- 1] Click on the field in the 'Ch/Pan' column.
- 2] Click repeatedly on the up arrow button until 'C' is selected.

3) Click the <RECORD> button.

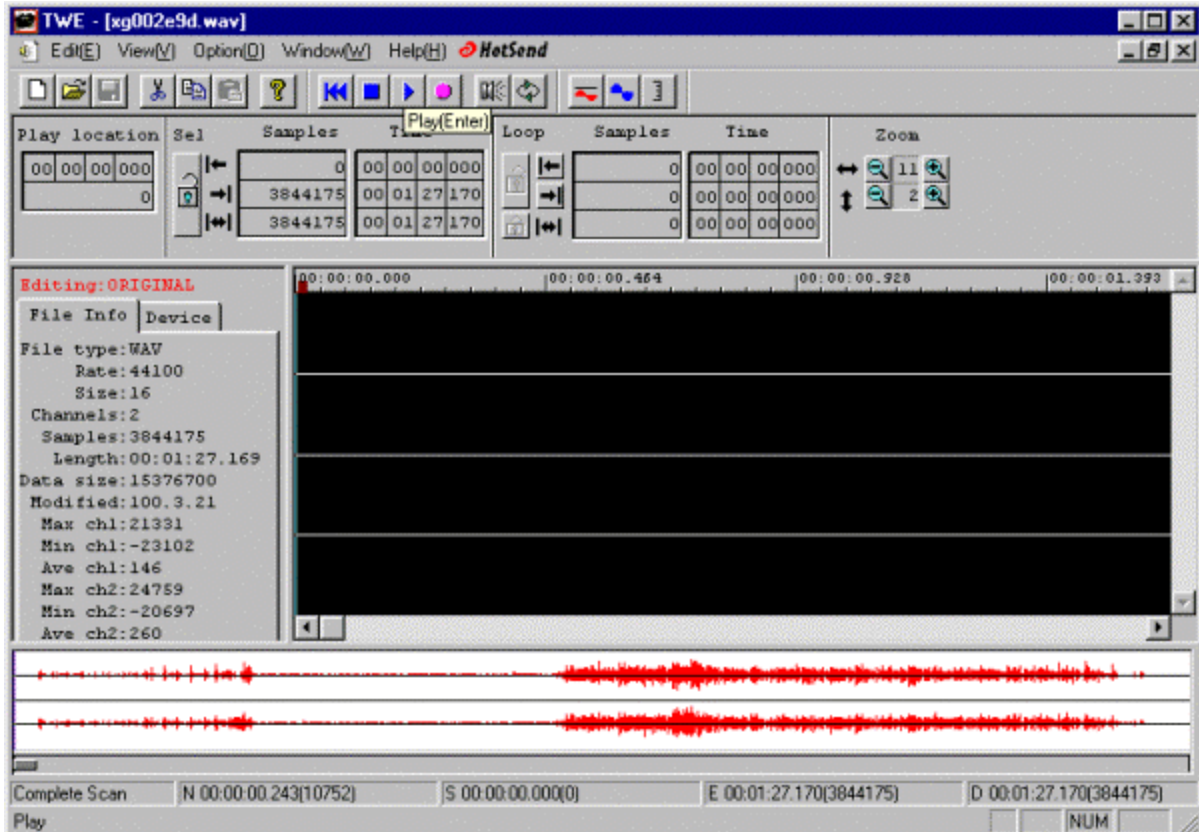
4) Click the <PLAY> button to start recording in XG Works.

5) Start playing back the MIDI sequence from the Yamaha MIDI instrument. The audio signal produced by the Yamaha MIDI instrument will be captured to the audio track in XG Works. Figure 3 shows the audio data in RED after it has been recorded to the audio track. This indicates that the sound data is automatically selected for editing and exporting.



## Exporting the Audio Track to a WAV File:

- 1) Click the 'Job' menu option from the main menu bar.
- 2) Select 'WAV Editor TWE'. The 'Select Working Dir#' window will appear on the computer display.
- 3) Select the directory where the file is to be stored and click the <OK> button. The audio track will be imported into the TWE (Tiny WAV Editor) program.
- 4) Type "CTRL-A" to select the audio data. Figure 4 shows a TWE editor with the imported audio data selected.



- 5) Save the audio data as a WAV file.
  - a) Type "CTRL-S" to open the 'Save' window.
  - b) Type in a name for the recording.
  - c) Select 'WAV' for the 'File Type'.
  - d) Click <OK> to complete the conversion.

**Related Content:**

[Basic Audio and MIDI Connections for a PC Based Recording Studio](#)

[Cable Required to Connect a Yamaha Digital Instrument to a PC or Mac for Audio Recording](#)

[Cable Requirements to Connect a Yamaha MIDI Instrument to a PC or Mac](#)

[Configuring a PC and a Yamaha MIDI Instrument to Communicate via the MIDI/Joystick Port](#)

**Writing a CD Audio Disk using a PC or Mac:**

Once a WAV file is created, a CD-R or CD-RW drive and a Windows program like Easy CD Creator or Nero Burning ROM can be used to write a CD Audio disk. These programs are usually bundled with Yamaha CD-RW drives.

**Related Content:**

[Mastering an Audio CD from a Set of WAV Files Using Easy CD Creator 4](#)

**Purchasing Yamaha IDE CD-RW Drives Online**

Yamaha IDE CD-RW Drives can be purchased online at [www.yamahashoponline.com](http://www.yamahashoponline.com). Below are the current items available:

- [CRW3200EZ INTERNAL IDE CD-RW](#)
- [CRW2200EZ INTERNAL IDE CD-RW](#)

**Purchasing Yamaha SCSI CD-RW Drives Online**

Yamaha SCSI CD-RW Drives can be purchased online at [www.yamahashoponline.com](http://www.yamahashoponline.com). Below are the current items available:

- [CRW2200SZ INTERNAL SCSI CD-RW](#)
- [CRW2200SXZ EXTERNAL SCSI CD-RW](#)

**Purchasing Yamaha CD-R and CD-RW Media Online**

Yamaha CD-R and CD-RW Media can be purchased online at [www.yamahashoponline.com](http://www.yamahashoponline.com). Below are the current items available:

- [3-Pak 10x CD-RW \(ReWritable\) Media, 650MB, 74-Min.](#)
- [10-Pak 24x CD-R \(Recordable\) Media, 700MB, 80-Min.](#)
- [20-Pak 24x CD-RW \(ReWritable\) Media, 700MB, 80-Min.](#)
- [50-Pak 24x CD-R \(Recordable\) Media, 700MB, 80-Min.](#)