

YAMAHA

POWER USER

MUSIC PRODUCTION With the MOTIF ES

Yamaha TWE – Wave Editor Using TWE to create .wav and/or AIFF Files so that you can burn a CD

Getting audio into your computer can be done easily with a USB Audio Interface like the Yamaha UW10. This device offers a high quality, cost-effective method to transfer audio (analog or digital) to your computer via its USB connection. The UW10 is a USB audio interface for Windows.

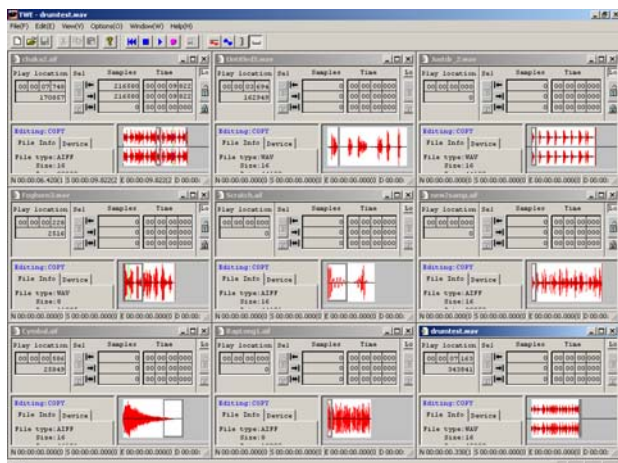
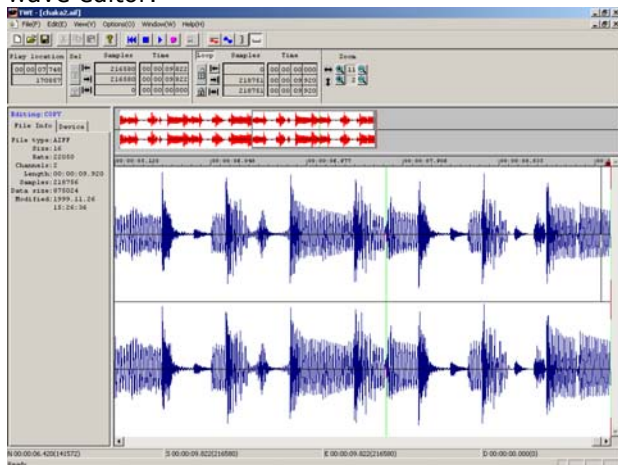


UW10 Ships with TWEplus

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TWE (wave editor)

The TWE program can be launched within an OPT sequencer environment like the SQ01 ver2.0 or can be used as a stand-alone wave editor. TWE is a full-fledged wave editor program and can create .wav or aiff files directly from the audio outputs of the Motif ES. We get asked often "How do I save my sequence so I can burn a CD?" Well, it is not as easy as saving a Motif file but certainly the easiest way is to use TWE. TWE is provided on the Motif ES TOOLS CDROM that accompanies your Motif ES. Connect the audio outputs of the Motif ES to your computer audio card (or audio interface). The Yamaha UW10 (or UW500) can be used to get live audio into the computer. Connect the L&R Stereo outputs to the inputs of the UW (set the level to 'line'), then TWE can record at 8, 16, 24, or 32-bit and can sample at 11k, 22k, 32k, 44.1k, or 48k. In order to create a .wav file from which to burn a CD, select 16-bit/44.1kHz. Interfaces like the UW10 or UW500 offer great flexibility when it comes to getting audio easily *into* and *back out of* your computer or when simply using the TWE program as a traditional wave editor.



TWE is a very useful piece of software that gives you all the tools you need to edit, loop, trim, convert, and other wise mangle your samples. It also allows you to use your computer screen for editing. You will find LOOP CROSSFADE editing here that can be useful when creating musical instrument sounds where you need to create a seamless loop.

The **UW500** USB Audio/MIDI interface is shown below. It features two 1/4" inputs with a level switch for MIC/Guitar/Line level inputs. It has a Headphone jack useful for monitoring, Digital Optical I/O, stereo RCA input for AUX inputs, and a stereo RCA INPUT 3, MIDI IN, MIDI OUT, and a TG "To Host" serial multi-port connection for up to 80 MIDI channels. That's 5 x 16 channel; on its own. External power supply



USB Audio/MIDI interface (Analog I/O; Digital I/O); Multiple-port MIDI interface.

The UW10 is a smaller, more cost-effective version of the UW500. It features USB connection, Digital optical I/O, L/R RCA input, L/R RCA output. The UW10 is a less expensive unit because it does not act as a MIDI Interface (it is strictly audio only – you don't need the MIDI interface when you are using the Motif ES) and the analog inputs and outputs are RCA connectors rather than the 1/4" jacks of the UW500. The UW10 is also bus powered – this means it draws power via the USB cable so no external power supply is necessary. The headphone jack is an 1/8" mini-jack rather than the 1/4" jack found on the UW500. The only difference is in the connectivity – quality is comparable.

Recording from the Motif ES to a computer

Setting up the UW10/UW500 for recording

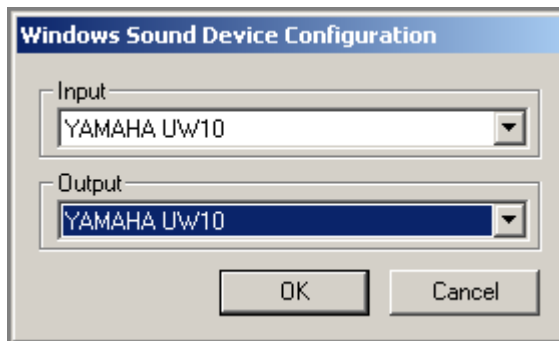
- Connect the UW to a computer via USB.
- Use two audio cables to connect the UW's INPUT jacks to the output jacks of the Motif ES. Cables are 1/4" to RCA
- Set the UW's SOURCE SELECT switch to "INPUT." (UW500 only) Set the INPUT 1 & 2

Switches to LINE; (UW10) set the Source Select to INPUT

- Connect the RCA outputs to a quality sound system.

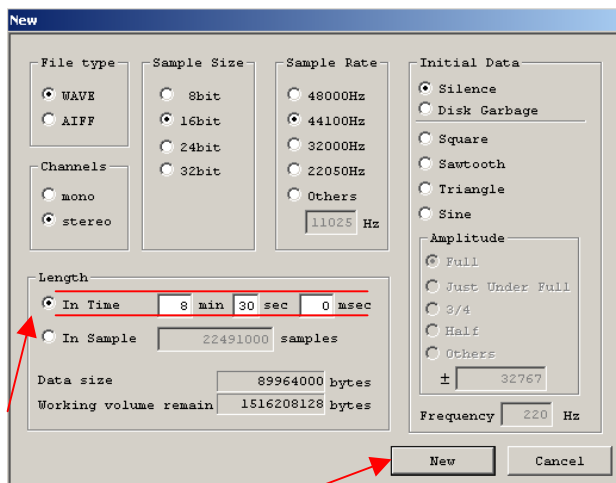
Starting TWE/TWEplus

- Start TWE on the computer.
- The "Browse for Folder" window opens.
- Select a recording destination folder on the hard disk, then click [OK].
- You can usually select the default folder.
- Click on [OPTIONS] on the toolbar and select "Windows Sound Device Configuration"
- Select the UW10 or UW500 driver



Setting up a new file

- From the [File] menu, select [New...].
- The "New" window opens.
- Select a file format: wav or aiff
- Generally, select "WAVE 44100Hz 16-bit stereo" for music CDs. This is the default setting.
- Specify an "In Time" value for the "Length" parameter (shown below). Specify the duration that is slightly longer than that of Song you wish to record. For example, if the recording source is an 8-minute, specify something like "8 min 30 sec 0 msec."



- Click "NEW" to open the empty session.

Recording into the TWE program is very straight-ahead. Press the red RECORD button, start playback of your Motif ES sequence and sit back and relax. When recording is complete press STOP – the program will draw the waveform. You may want to test a portion of the data to ensure good record level. Once you are sure you have a decent record level go ahead and transfer your audio. Trimming the wave to size is very intuitive using your mouse to define regions. Mastering the TWE program will take you just minutes.

Alternate Method of getting data from the Motif ES to TWE

The Motif ES can save user samples as .wav or aiff files. These can easily be saved to an optional SmartMedia cards (up to 128MB) or to an optional USB drive device for transport to your computer. This method is basically using the Card or USB drive to 'shuttle' the data to your computer. Any user sample in the Motif ES can be saved as follows:

If your sample is in a SONG or PATTERN, select that Song or Pattern...

If your sample is in a VOICE select that Voice...

- Press FILE
- Press F1 CONFIG and select the Current device "Card" or "USB"
- Press SAVE
- Select "Wav" or "Aiff" as the TYPE
- Cursor down between the brackets and give the file a name
- Press ENTER
- You will be asked to locate your sample. If in the sequencer the TRACK and NOTE will appear. If in a Voice, the ELEMENT and KEYBANK will appear. Use this to locate your sample. Use the SF1 AUDITION button to verify that it is your sample
- Press ENTER again to execute.

Once the data is stored to the media you can shuttle it over to your computer. TWE will allow you to OPEN the data.

UW10 software: TWE Plus

The UW10 ships with a special expanded version of the Yamaha wave editor called, "TWEplus". This version adds the ability to Import and Export files in MP3 format. If you plan on posting data to the Internet or transferring files via the email, the ability to export your data as .mp3 will be very valuable. Like all versions of TWE, TWEplus can load, save and convert .wav, aiff file formats; it can convert sample rates, and convert bit size.

What if I own a Macintosh computer?

TWE can run on either a Windows computer or a Macintosh computer. The only difference for Macintosh users is that you will have to get the

audio into your Mac. Yamaha currently only makes AUDIO (UW10) and AUDIO/MIDI (UW500) interfaces for Windows computers. You may already have an interface that satisfies your need in getting audio into your Macintosh computer. TWE is a program that is on the CDRom that comes with your Motif/Motif ES so you have it already and configuring it is straightforward and you will find it an excellent tool to have in your kit.

A Word on Digital Transfers

The question is often asked, "Do I lose much by transferring my data via the analog outputs versus digital outputs?" The answer is one that cannot be simply answered, yes or no. A digital transfer allows you to clone or make an exact duplicate of the original signal - there is theoretically no difference between the 0's and 1's of the source and the 0's and 1's of the destination file. Does this mean that digital transfer is necessarily superior to an analog transfer? Well no - with today's negligible noise floor one cannot definitively tell the difference. Now, don't get me wrong, there are probably 'golden ears' out there that will pick it out every time but depending on the material (music) it is not that significant a difference. If you intend to transfer your mix via the digital (optical) connection options available, here is what you need to know: The original Motif had an optical digital output, so you can connect this output directly to the optical digital input on the UW units and clone the mix. If you own the Motif ES you would need the AIEB2 expansion board to get access to optical digital outputs. You will have to weigh the cost versus advantage in this scenario. *Is the digital transfer better?* Well no doubt. *Is it worth the additional cost of adding an AIEB2?* This is something you will have to decide. If you are confident in your gain staging skills, you should be able to transfer your data from the analog outputs of the Motif or Motif ES with full confidence that the signal will arrive in your computer with full integrity and fidelity. Of course, the option to 'shuttle' the data, mentioned above, also exists...there is no loss when the data is shuttled.

CD Creation

Once you have recorded your music to TWE, you can save the data using "Save as..." .wav (Windows) or aiff (Macintosh). These are the common formats that your computer can burn to audio CD. Check the documentation of your computers CD creation software. In general, you should use the two formats mentioned above. Although TWEplus can export the data as .mp3 format, remember it is not as high quality as .wav or aiff. MP3 is a compression scheme that can reduce the size of the file greatly when uploading or emailing is your goal. The sound quality of the

.wav or aiff file will be superior in most cases to any mp3 format.



UW10

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