Marantz PMD 671

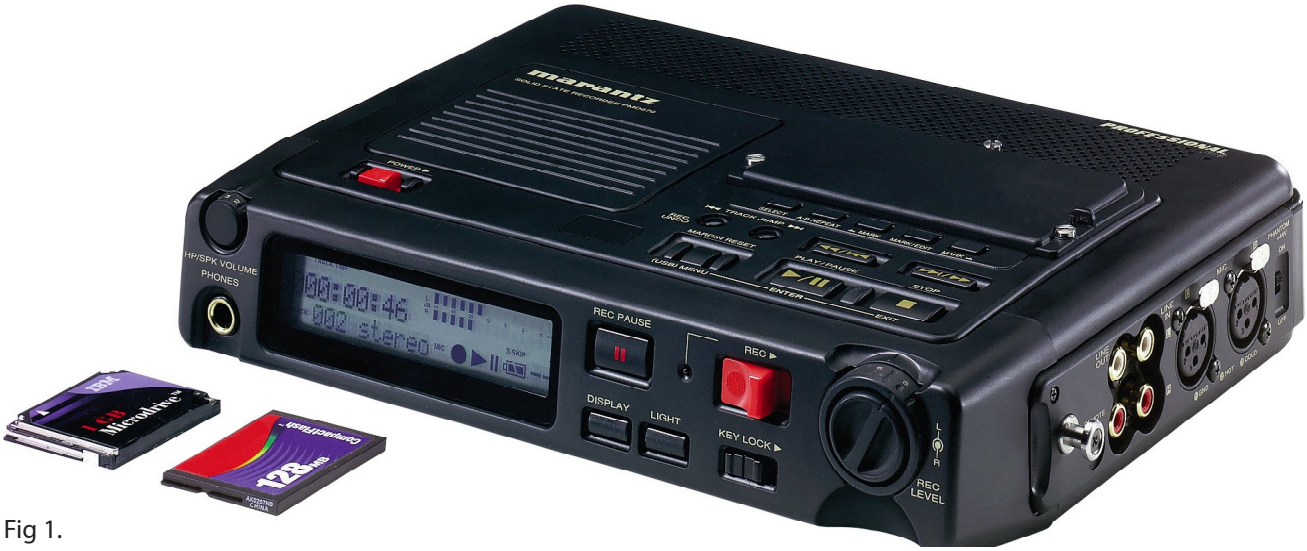


Fig 1.

The Marantz PMD 671 is a portable solid-state recorder that's designed for location recording. It's totally portable, has a maximum battery life of 6 hours, and with the addition of its' XLR inputs allows you to use phantom powered microphones.

Batteries Not Included

There are three ways of powering the PMD671:

1. Use the supplied DC adapter and plug it into a mains socket.
2. You can use eight AA batteries that slot into a special chassis, available on request.
3. Use rechargeable battery pack that can be charged while in the unit using the DC adapter.

The final option is probably the one you will use. The University doesn't supply batteries so unless you buy eight AA's then you will be using the fully charged battery pack. This will give you around five hours of recording time.

Setting up the PMD 671 for the first time.

To record on the Marantz you need to make three important decisions:

1. Whether you are going to record in Stereo or Mono?
2. Where you are going to record sound from?
3. What format you are going to record sound in?

The table on the next page illustrates the combinations of the first two decisions. Fig 3 & 4 are quick step guides to changing between Stereo and Mono modes. To choose where the sound is recorded from you press the INPUT button and toggle bewteen MIC, INT MIC, Line, and DIGI. Fig 5 shows you how to change the the record format .

		Menu Selection				
INPUT Button Selection	input (s) connected	St. Mode			Mono Mode	
		Stereo	L-Stereo	0-20db	Mono (L CH.)	LR Mono (Mix)
INT MIC	Internal Microphone	L: INT MIC / R: INT MIC	L: INT MIC / R: INT MIC	**N/A** *defaults to L-Stereo*	INT MIC	INT MIC
Line	L&R LINE IN	L: L LINE IN / R: R LINE IN	L: L LINE IN / R: L LINE IN	**N/A** *defaults to L-Stereo*	L LINE IN	L + R LINE IN
	L LINE IN only	L: L LINE IN / R: —	L: L LINE IN / R: L LINE IN	**N/A** *defaults to L-Stereo*	L LINE IN	L LINE IN
	R LINE IN only	L: — / R: R LINE IN	L: — / R: —	**N/A** *defaults to L-Stereo*	—	R LINE IN
Mic	L&R MIC IN	L: L MIC IN / R: R MIC IN	L: L MIC IN / R: L MIC IN	L: L MIC IN / R: L MIC IN (-20db)	L MIC IN	L + R MIC IN
	L MIC IN only	L: L MIC IN / R: —	L: L MIC IN / R: L MIC IN	L: L MIC IN / R: L MIC IN (-20db)	L MIC IN	L MIC IN
	R MIC IN only	L: — / R: R MIC IN	L: — / R: —	L: — / R: —	—	R MIC IN
Digi-in	DIGITAL IN	L: L DIGI IN / R: R DIGI IN	L: L DIGI IN / R: R DIGI IN	L: L DIGI IN / R: R DIGI IN	L + R DIGI IN	L + R DIGI IN

Fig 2.

The PMD 671 can operate in two modes, Stereo and Mono. Stereomode has three modes of operation:

Stereo - Records two channel stereo across L & R channels.
L-Stereo - Records the left input onto both the L & R channels.
0-20dB - Records the left input on both channels , only one is reduced by -20dB.

Mono mode has two variations:

Mono (L CH) - Records the left inoput in a MONO file.
LR (Mix) - Records both the left and right inputs oas a mono file.

To change between the Stereo modes follow these instructions:

Press & Hold MENU/STORE for 2 secs	Preset
Double Click ENTER	Record Format
Press F.FWD/+ until	St Mode
Press ENTER	Stereo/L-Stereo/0-20dB
Press F.FWD/+	Tab Thru Modes
Press ENTER	Stereo Mode
Press MENU/STORE	Store & Exit

Fig 3.

To change between the Mono modes follow these instructions:

Press & Hold MENU/STORE for 2 secs	Preset
Double Click ENTER	Record Format
Press F.FWD/+ until	Mono Mode
Press ENTER	Mono/L-R Mono
Press F.FWD/+	Tab Thru Modes
Press ENTER	Mono Mode
Press MENU/STORE	Store & Exit

Fig 4.

To change the Record Format follow these instructions:

Press & Hold MENU/STORE for 2 secs	Preset
Double Click ENTER	Record Format
Press F.FWD/+ until	Record Format
Press ENTER	Choose your Format
Press ENTER	Choose your Settings
Press ENTER	Until back to RecFormat
Press MENU/STORE	Store & Exit

Fig 5.

Microphone or Line Level?

The PMD 671 can record sound from a number of different inputs but it's the XLR inputs, along with their ability to provide phantom power, that really sets this recorder apart from the rest. The reason this is such a benefit is that you have the ability to use condenser microphones such as the Sennheiser 416, these provide extended high frequency response and a lower noise level compare to dynamic microphones.

One of the other options for getting sound into the PMD671 are the LINE IN sockets, these would be used for recording line level signals such as the output from a mixer or a keyboard.

For times when audio fidelity isn't of paramount importance the built in microphone offers a quick and easy way of recording sound.

The digital inputs allow for yet another way of getting audio in and out of the PMD671. In order to make use of this socket you'll need another piece of equipment with a digital in/out socket such as a MiniDisc player.

To Adjust which Input you are recording from follow these intructions:

Press INPUT - Input will change.

If you keep pressing the input button you will scroll through the four different inputs. Once you have chosen the correct one make sure you're recording in the correct format and mode (Stereo or Mono).

Important: If you do use external microphones that require Phantom Power you need to turn Phantom Power on using the switch next to the XLR inputs.

We have now covered the three most important features that the Marantz has. Before you hit record always remember to check:

Record Format	-	MP3, 16 bit or 24 bit?
Stereo or Mono Mode	-	Stereo / L-Stereo / 0-20dB or Mono / LR Mono
Input	-	Mic / Line / Internal Mic / Digital

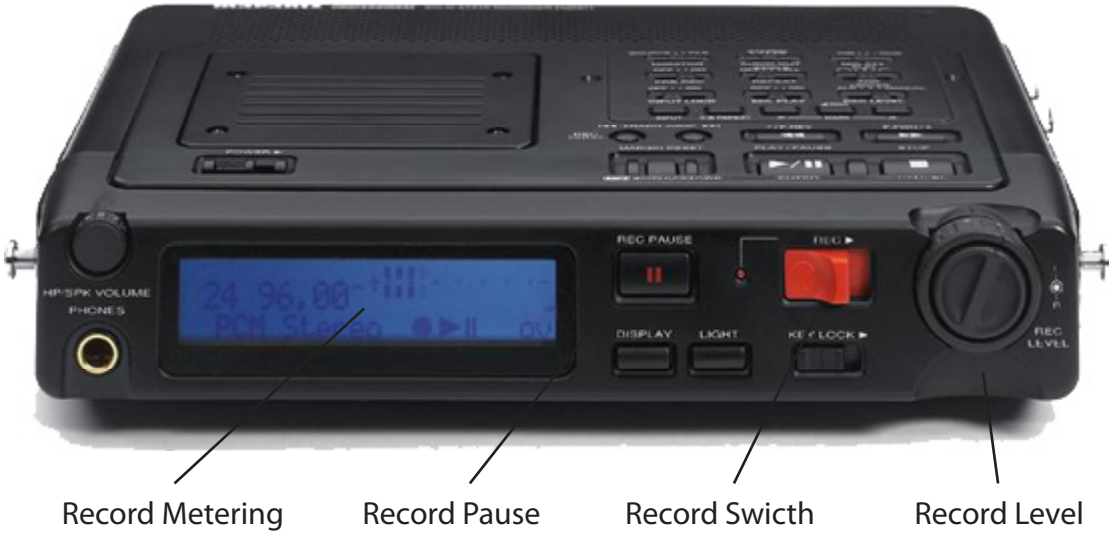
You have to understand these features otherwise you run the risk of compromising your recordings or possibly not recording at all!

The Marantz comes pre-programmed with three different presets. These provide a good place to start depending on what you are recording.

Preset 1 - Uncompressed 24 bit 44.1kHz (Use for Music)
Preset 2 - Uncompressed 24 bit 48 Khz (Use for Film)
Preset 3 - MP3 320 kbps, 44.1kHz (Use as a dictaphone)

Recording

So, you've checked that all the settings are correct and you're ready to record. Instead of sliding the red REC button to the right, press the REC PAUSE button. This puts the unit into record mode and allows you to monitor the sound being recorded. Now you can hear the sound you must set an appropriate record level. In the LCD screen you'll be able to see a meter illustarting the level of the audio as it's coming in, you can adjust the audio level by using the REC LEVEL control, notice that there are actually two controls here, one for each channel. Once you are happy with the level you can slide the large red switch over to the right and you will be recording.



Whilst you are recording you can do a couple of nifty tricks. Frist off, if you slide the record switch across to the right again you will create a new track without any break in the recording. This is re-all handy if you are interviewing someone. You can devide the interview into the questions you're asking simply by sliding the switch before you ask your next question.

Getting the files onto the Computer

Now that you've got some audio into the unit you'll want to hear it and also get the files onto a computer so you can edit them. The PMD671 has the following output options:

- Built in Speaker - This is really handy for allowing you to hear what you've just recorded without the need for any other equipment.
- Headphone - Obviously this is where you plug in your headphones.
- Line Out - Use this socket to plug into a Hi-Fi or mixer.
- DIGI Out - If you have equipment with a DIGI in you can connect using this socket.
- USB Transfer - Use this to transfer the files from the memory card onto a computer.

The PMD671 acts like many other pieces of digital equipment in that it has a USB socket on the unit that can be used to transfer files to a computer. In order to do this you need to follow this precedure:

Turn the PMD671 off.

Connect the USB cable to the PMD671 and the computer.

Press and Hold the Menu/Store button. As you're holding it turn the unit on. This will make the unit boot up in USB transfer mode meaning that a removable drive will appear on the computer. From here you'll be able to drag and drop you file to wherever you want on you computer. A word of warning though don't touch the EDL files, these refer to markers in the audio files. If they are removed the audio file it references might not be able to play.

Additional Features

Now that we have covered the basics it's time to look at some of the more advanced features. These don't have to be used but there are certain times when you may find them extremely useful.

Auto Mark

During recording or playback you can 'mark' points in the audio where significant events happen allowing you to recall these positions later. When AUTO MARK is switch ON a marker is automatically made if the recording is paused at any point. If AUTO MARK is off then pause during recording doesn't create a marker.

You can switch AUTO Mark on/off by following this procedure:

Press and Hold the MENU button	-	Preset
Double Click the ENTER button	-	Rec Format
Use F.Fwd / F.Rwd to select Auto Mark	-	Auto Mark
Press ENTER	-	On
Use F.Fwd / F.Rwd to toggle on /off	-	On /Off
Press ENTER	-	End

Manual TR

Manual Track allows you to use the record switch to create a new track as you're recording without any break in recording, with Manual TR switched to off pressing the record switch does noth-

To switch Manual TR on / off follow this procedure:

Press and Hold the MENU button	-	Preset
Double Click the ENTER button	-	Rec Format
Use F.Fwd / F.Rwd to select Manual TR	-	Manual TR
Press ENTER	-	On
Use F.Fwd / F.Rwd to toggle on /off	-	On /Off
Press ENTER	-	End

Recording Setup Controls

These controls are usually hidden under the screw on plate but I'm going to explain their default settings, so you know what is possible when these settings are accessible.

MONITOR - Source / File

Use this switch to toggle between monitor modes. When switched to source you hear only what is coming into the source. When sitched to File you hear what has been recorded onto the memory card.

Pre Rec Switch

When Pre Rec is switched on the unit will be constantly saving anything up to four seconds of audio. When the record button is pressed this buffer is saved with the file. This is great if you just missed a bit of action, if you hit record before 4 seconds has passed then you will have recorded it. The times of Pre Rec vary with recording formats, here's a run down of the variations:

- 24-bit PCM - 1 second
- 16-bit PCM, MP2, MP3 - 4 seconds
- 16-bit PCM, MP3 with RAW - 2 seconds

INPUT LOCK Switch

There may be times when you don't want any accidental touches to alter the unit, imagine finding out that you failed to record an entire concert because somehow the pause button got pushed during the first number! The INPUT LOCK allows you to disable the INPUT button, this means you will only be able to record from one of the four sources.

Stereo

This switch allows you to select whether audio from both channels is played out of both channels OR audio from the Left channel is output across L+R channels OR audio from the Right channel is output across the L+R channels. This is handy if you have been recording mono signals at different levels and you only want to monitor one rather than the other.

MIC ATTEN switch

This switch allows you to decrease the microphone sensitivity by 20dB, this can be very handy if you are recording very loud sources such as a plane taking off or in a night club. If you've turned down the microphone sensitivity and the level is still distorting the preamps then you can give yourself 20dB more headroom.

This covers the major setting you're likely to use whilst recording with the PMD671. Now let's discuss some setups and where they would most likely be used.

Example 1

Location recording with a film crew:

Input Select	Stereo (mic)
Record Format	24 Bit / 48kHz
Record levels	Set independently whilst monitoring

Using this setup you could have one channel recording a boom mic and another recording an actors radio microphone. This would be great if you were filming a wide shot and you couldn't get the boom close enough to the actor, the radio microphone would pick up a clear direct sound , the boom mic could then be used to record soume of the ambience of the scene. 24 bit / 48kHZ has been chosen to give us the best audio quality and match the sampling rate of most film projects. Using the separate levels for L+R channels you can set the recording levels of the L+R channels independently.

Example 2

Location recording with a mixer:

Input Select	Stereo (Line)
Record Format	24 Bit / 44.1kHz
Recording Levels	Set the same.

Used in combination with a mixer the PMD671 allows you to record many more signals. Using one of the Universities portable mixers you can mix up to four sources and send them out either on balanced XLR's or a line out. For the purpose of this example we'll say it's coming in on the LINE in so that's why we've chosen Stereo (LINE) from the input selection menu. Again we want to keep the quality as best we can so that's why we've got 24 bit / 48kHz.

Example 3

Used as a Dictaphone.

Input Select	L-Stereo (Int Mic)
Record Format	MP3 Stereo 160kbps 44.1kHz
Recording Levels	Set the same.

Because audio quality isn't really an issue here an MP3 setting will do. We're using the internal mic so there is no need to worry about matching input levels because the same signal is going to be recorded on both channels.