

1. Why PAW120 is bigger than PAW100 in size?

In PAW100, rechargeable Lithium-Ion batteries were used to reduce the size. But due to the conditions required for the recharging, we have found that several batteries have to be prepared if long-time record is in need. To overcome the problem, we have used widely available AA batteries in PAW120, which makes Paw 120 bigger than Paw 100.

2. How to copy the settings from PAW120 to the other machine?

Connect the ready-to-use PAW120 to a PC, and the machine is in USB communication status. From the pop-up removable disc, you can find “SYSINI” directory. Under this directory, there are three documents, which are “System.dat”, “InDev.dat”, and “Template.dat”. All input device template options are saved in “InDev.dat”; In “Template.dat”, all the compress formats are saved; all other system settings are saved in “System.dat”. By copying the relevant document to the directory of “SISINI” of the other PAW120, you can easily achieve the task.

3. Why does software updating fail?

In order to smoothly update the software, you need to make sure that the recorder has the full capacity of the batteries. The reason is that, during the updating process, while the updating file “APP.COE” is copied from PC to the UPDATE removable disc, the updating file is saved in the recorder’s flash memory. Only when the recorder receives the disconnecting signal from the USB port, will this file be written into the flash memory. Therefore, if there is no battery, or the batteries are not fully charged, it is unable to write the updating file into the flash memory, leading to the failure of software updating.

4. What are the consequences of the failure of software updating?

There are two kinds of consequences: either there is still the old version when the recorder is switched on, or the recorder can’t be switched on at all due to the half-processed updating. In whatever situation, re-updating is absolutely possible.

5. Why batteries should be installed when transferring files via USB?

In order to speed up the data transfer via USB, a buffer is created in the memory of PAW 120 when the recorder is disconnected from the USB port. Therefore, if there is no battery in the recorder, the data loss in the buffer area will occur, leading to the writing failure of data to the flash memory. Since the data is built-in, the data loss probably will cause the damage of the file system, resulting in the loss of files, or crash of the recorder.

In such circumstance, user must immediately start the disc formatting in PAW 120.

6. What does user need to pay attention when charging the batteries?

User can use re-chargeable batteries when recording. However it is highly recommend to use AA batteries (alkaline batteries) when proceeding communication via USB. The reason is that, when the recorder is disconnected from the USB port, the power supply is provided by batteries instead of USB. But the power supply by rechargeable batteries is not able to provide strong electrical current support required under such circumstance, which will cause instantaneous power cut-off, or instable power supply. The symptom is that user is unable to return to the record / playback menu, or there is no response when touching the keys or the file system will be damaged. The batch produced after May 2006, this problem has been solved.

In such circumstance, user must immediately start the disc formatting in PAW 120.

7. Why INT-MIC has lower recording volume?

The INT-MIC gain of PAW 120 is locked, i.e. user can not adjust the gain by moving up/down, left/right keys. It is because that, when the gain is too big, any small noises such as the scrubbing of the cover, pressing of the keys, or the electrical noises will be recorded. Therefore, the INT-MIC gain is fixed at a low level in the software, which anyhow user can obtain the ideal recording effect when the interviewee is within the range of half meter in a quiet environment. If the interviewing range is over half a meter, or the interviewee speaks in a low volume, the recording volume will be reduced in proportion as well. It is suggested to use EXT-MIC under such circumstance.

8. Why the recording volume is low when using IECM-1?

It is because the recorder has a default parameter for IECM-1, which has not been designated to have a big gain. The reason for that is, the big gain will reduce the recording level when source of sound is too near, or the sound is too loud. This kind of reduction will cause distortion of the sound, which can't be recovered through post-production; but the gain can be enhanced through post-production if the recording level is fixed at a low level.

Practically user can adjust the gain manually to solve the problem of low volume of the recording volume.

- Press "OK" to enter the pre-recording status
- Press "left/right" key to adjust the recording level

When using default factory setting, the gain of the input device is locked, which means that user can not adjust the gain during the pre-recording and recoding. However, user can adjust the gain by selecting "Manual" or "Lock" in the menu of "Lock input device gain" in the menu with the Chinese system setting.

The recording sensitivity is very high when the input device gain and recording level are set at a high level, which will cause squeals in the headphones.

9. What is the relationship between the gain of input device and level of record device?

To enhance the file's recording level and volume, user can adjust the gain of input device and the recording level, and the enlargement function of these two is duplicated. However due to the different nature of the two settings, only through the proper adjustment of different levels of recording device, will the best recording effect be achieved.

The function of the input device gain is to balance the sensitivity of different EXT-MICs. The setting of the input device gain makes it possible to get almost the same input recording level among different MICs, before PAW 120 is proceeding AD transforming. This level of gain is achieved on the simulator.

Recording level is used for adjusting the gain within a limited range under a certain recording environment. For instance, the distance from the interviewee and the volume of the speakers' voice are the changeable factors in every interview.

Under a normal situation, user does not need to adjust the input device gain when an EXT-MIC is adjusted. Instead user can just revise the recording level of device to adjust its level. However under some extreme circumstances, when recording requirement are not satisfied even though the recording level is at its highest level, user can use input device gain to get sufficient recording level. But when the gain is also adjusted to its highest level, it may increase the background and ambient noises.

10. How to obtain the highest degree of sensitivity of an EXT-MIC?

PAW 120 can have the biggest gain of 82dB, when user sets the input device gain to the highest level of 24dB, the recording level of device to 84dBspl, and the MIC amplification to 34dB.

11. Which parameter will affect the volume of EXT-MIC?

The setting in the input device gain as well as the MIC amplification will affect the volume of EXT-MIC.

12. What should user check when there is no sound using EXT-MIC to record?

- a. Check if the switch of the MIC, and make sure it is turned on.
- b. Check the setting of the power supply in the input device template, if the EXT-MIC needs power supply.

- c. Check the input device gain of the EXT-MIC, and make sure it is big enough.
- d. Check the EXT-MIC is tightly connected to the machine.

13. Why does user need to set a new input template when using other MIC?

It is because the different working nature as well as the different parameters of different MICs.

14. How many are there the types of EXT-MICs? How to set the input device template according to each type?

a. Dynamic MIC

User should select the input template which the power supply is switched off, as the dynamic MIC does not require power supply. As the dynamic MIC is not very sensitive, user should set MIC amplification to 34dB. As the MIC has the lowest level of noise, user can set the wave filter to 20-20KH. The input device gain can be around 6dB, and user can adjust the gain according to the MIC's sensitivity.

b. Capacitor MIC with batteries

User should select the input template which the power supply is switched off, as the batteries inside the MIC provide power supply. This kind of MIC is very sensitive, so user can set the MIC amplification to 19dB, wave filter to 20-20KHz, and input device gain to 3dB. All these can be slightly adjusted according to the sensitivity degree of the MIC.

c. Capacitor MIC without batteries

This kind of MIC needs polarization voltage supplied by phantom power transformer, and the output signal will be sent to the input port of EXT-MIC. Other settings are the same as capacitor with batteries.

d. Electret MIC with batteries

Sony 907 portable MIC is the most common one of this type. User should select the input template with power off, as the MIC has power supplied by the batteries. If the power supply is switched on in the input template by mistake, it will cause unnecessary noises. This kind of MIC is sensitive; user can set the MIC amplification to 19dB, wave filter to 100-20KHz, and input device gain to around 9dB which user can adjust according to the sensitivity degree of the MIC.

e. Electret MIC without batteries

The most common ones in the market are clip-on MIC, head MIC and IEMC-1 MIC provided by PAW120. User should set the input device template with power on, as this kind of MIC needs power supply by the recorder. User can set the MIC amplification to 19dB, wave filter to 100-20KHz, and input device gain to around 9dB which user can adjust according to the sensitivity degree of the MIC.

15. Does PAW 120 support phantom power supplies?

PAW 120 can not directly support electret MIC which requires 48v phantom power. But the sound frequency output of a phantom power converter can be connected to the PAW 120 EXT-MIC. It means that the 48v phantom power electret MIC can be connected to a PAW 120 through the converter.

16. What are the criteria when choosing pressing template?

Different ways of pressing will affect the size of the recording files. Following are the pressing algorithms supported by PAW 120:

a. 16 bit PCM WAVE file

It is a non-pressing algorithm; the factor affecting the file quality is the frequency. But the size of the recording file is very big, it is suggested to use this format when proceeding high quality and complete recording.

b. MPEG I Layer II

It is the algorithm suitable for editing. It is a compress algorithm used in radio broadcasting. The quality and size of the file are almost the same as using MPGI LayerIII. This can be used when user needs to edit the file in the sound frequency work-station. The pressing quality varies with the choices of sampling frequency and compression rate. The bigger the size of the recording file, the better the quality. User can use this pressing algorithm when interviewing; the sampling rate can be 48 KHz. In voice recording, the sampling rate is 64Kbps, and in music recording, the rate can be 256Kbps Stereo.

c. MPEG I LayerIII

This pressing format will have a better file quality the MPEG 1 LayerII when the size of the file is same. But it is not suitable for file editing otherwise is the same as MPEG I Layer II.

d. G.729.a

This algorithm can assure the quality of recoding voice of mobile phones, but the size of the file is small. It is suggested to use when proceeding pure voice recording. The disc capacity is 128M and the recording length is 36 hours.

e. CCITT a-law. CCITT u-law

This is similar to G.729.a, but the file has better quality and pressing rate is also bigger than G.729.a.

PAW 120 provides three kinds of file formats, they are standard WAVE, standard BWF, and RAW. WAVE format is recognizable by most desk-top computers; BWF is recognizable only by the professional sound frequency work-station. Only MPEG I

LayerII and MPEG I LayerIII can be used to set RAW format, which is recognizable by majority desk computers.

17. What are the differences between LINEL, LINEH and LINE in the input device?

These three are cable input devices, the differences are as follows:

LINEH

It is used for high level of input devices, such as sound mixing console, professional CD machines, professional cassette machine, with full output level of 24dBu. PAW 120 can decrease the input signals to a quantifiable range before AD transforming, and user can not adjust the value of attenuation compensation.

LINEL

It is used for low level of input devices, such as the portable machines like CD machine with batteries, recorder, MD, and non-professional recording and playing equipments. The full out level of these devices does not exceed 3dBu. PAW 120 will increase the input signals before AD transforming, and user can not adjust the value of attenuation compensation.

LINE

User can use LINE when both LINEH and LINEL can not satisfy the requirements of the input devices. User can also choose secondary devices, and can adjust the value of attenuation compensation.

18. What is the standard unit shown when adjusting the level of recording device? How is it defined?

The standard unit is dBspl, which is sound pressure unit. The bigger source sound volume is, the higher dBspl.

The value shown when adjusting the recording level is the intensity of the source sound. The lowest sound intensity is 84 Bspl shown on the right side, therefore when this value is in use, PAW 120 has the highest level of gain. The highest sound intensity is 144Bspl shown on the left side. When user chooses this value, PAW 120 has the smallest gain.

19- Why user can not return immediately to the recording menu after disconnecting from the USB port when USB communication is finished?

It is because the re-chargeable batteries are used to supply the power of the recorder. As the rechargeable batteries are not able to provide the strong electrical current support required when the recorder is disconnected from the USB port; it will cause unstable power supply of PAW 120, which in return will cause the damage of file

system, file loss, or even crash of the recorder. Therefore user should not use re-chargeable batteries when proceeding USB transferring.

20. What are the functions of each item in input device template?

a. Template name

It can be English letters or digital numbers. Chinese characters will be shown as “XXXX” when using PC to create a Chinese name, since Chinese characters are not able to be shown in that item.

b. Input device

Currently user can use the following input devices:

INT-MIC: when INT-MIC is in use.

EXT-MIC: when EXT-MIC is in use.

LINEH: when connecting high level of recording input devices.

LINEL: when connecting low level of recording input devices.

LINE: line input devices, user can set decrease or increase of the recording level.

c. Input device gain: the parameter is set according to the input device sensitivity. When INT-MIC is used, the adjustment range is 0-30dB; when EXT-MIX is used, the range is 0-24dB; when LINEH and LINEL are in use, the parameter is non-adjustable; when LINE is in use, the range is 0-24dB.

d. MIC amplification: the parameter is adjustable only when the input device is EXT-MIC. The range is 19dB-34dB. For low sensitivity MIC such as the dynamic MIC, the parameter can be set at 34dB; when a capacitor or electret MIC is in use, the parameter can be set at 19dB.

e. Power support: the parameter is adjustable only when the input device is EXT-MIC. It can supply power to the EXT-MIC via output connector with 1.5v, 20mw power support. When the electret EXT-MIC without batteries is used, user can use this function.

f. Wave filters: the parameter is adjustable only when the input device is EXT-MIC. It can be set in the range of 20.20 KHz and 100-20 KHZ. When the input device is a non-source device such as a dynamic MIC, the parameter can be set at 20.20 KHz.

21. What the functions of each item in the compress template?

a. Compress template name: it is used to differentiate template names.

b. Compress algorithms and compress format: different kinds of algorithms can be chosen under different kinds of formatting. Please refer to question 16 for details.

c. Sampling rate: it is hardware sampling rate. It varies with different kind of supporting algorithms. The higher sampling rate is, the better frequency response.

d. Compress rate: the higher the rate, the better the recording quality, but with the bigger file size.

e. File extension name: each file format has a default file extension name for the desk-top computers to recognize and manage files, but user can still set the file

extension name such as “S48”, “S44”. Whatever name is in use, PAW 120 can recognize the recording files.

22. How big the power supply of an EXT-MIC is needed to support an electrets MIC?

The power supply of an EXT-MIC can support the electrets MIC with no voltage required. The output power supported by the power supply of an EXT-MIC is not less than 1mw.

23. Why user can not find the recording file after PAW 120 is connected to a PC?

It is defaulted by PAW 120 to put the recording file under the sub-directory of “RECORD”, user can change the position of the directory to any place in PAW 120.

24. Why there are a lot of directories except the recording file after PAW 120 is connected to a PC?

PAW 120 will create at the same time a directory when the recording file is created. The directory has the same name as the recording file, but with an extension name of “.DIR”. This directory is needed for saving the supporting files which can be used for editing the recording file. If this folder is deleted, the recording file can not be edited in the machine...

25. Is it possible to set the working directories of PAW 120 under SYSINI?

User can set the default working directories of PAW 120 to any place of the saving devices in the machine. Recording can be undertaken under SYSINI, but user can not delete the files in SYSINI in the file management menu due to the need of protecting the system files.

26. After using the default MUSIC template, or MPIL2 compress template, putting the recording file at Air 2000, or other audio frequency work-station, the record playing is fine, but the wave shape is not normal. How to solve this problem?

The problem can be solved by updating the software to V2.9, or higher version.

27. How to prevent the copy of non- audio- frequency file to PAW 120?

User can update the software to non-Mass version, then download the audio frequency file through “PawExplore.exe”.

28. What are the files in the supporting directory of a recording file?

The file with extension name of “.MAK”

The file with extension name of “.CUT”

The file with extension name of “.PAK”

29. In file management menu, why does the left side of files show a musical note, and right side show a small MIC sign?

The small MIC sign means that user is able to edit the file, while the musical note means that user can not edit the file. When the sub-directory of editable files is deleted, the original small MIC sign will turn to musical note as well, which means the file is non-editable.

30. Where to get a new version of software updating for PAW 120?

User can down load the software updating version from www.paw-recorder.com . The program file name is “APP.COE”.

31. What kind of file format can be edited in PAW 120?

- 1) PCM16 full sampling rates can be edited.
- 2) MP1L2 32KHz and 48 KHz sampling rate can be edited, but 44.1 KHz sampling rate can not be edited.
- 3) MP1L3 can not be edited.
- 4) a-Law / u-Law all sampling rates can be edited.
- 5) G.729.a can be edited.