

Chapter 18 Using a DAT Recorder (DAT Backup)

This chapter explains the procedures for using a DAT recorder in conjunction with the VS-1680. Refer to the owner's manual for your DAT recorder as you read this section.

I. Before Backing up to DAT

Song data can be saved using a DAT recorder by connecting the VS-1680's DIGITAL OUT connector (coaxial or optical) to a DAT recorder. This procedure is referred to as **DAT backup**. The procedure of loading previously backed up song data into the VS-1680 is referred to as **DAT recover**. The song data backed up includes the data of all V-tracks, and song settings such as locators, markers, mixer scenes and Automix data. Make backups of your data as a precaution against unexpected problems, or when your drive is full and no more recording is possible. Since DAT tapes are easily transported, this is a good way to exchange song data with a friend who also has a VS-1680. We recommend that important data be backed up onto multiple tapes.

? DAT (Appendices p.63)

** You may lose song data if you incorrectly perform the DAT Backup procedure. Roland Corporation assumes no liability concerning the loss of such data. Furthermore, Roland does not warrant any copied data, regardless of the performance or condition of the DAT recorder.*

A. Items Necessary for DAT Backup

- VS-1680
- Internal IDE hard drive
- DAT recorder
- Blank DAT tapes
- Digital connection cables (coaxial or optical)

B. About the Devices Used in DAT Backup

DAT recorder:

You can use a conventional DAT recorder. Other digital recording devices such as MD recorders or DCC recorders cannot be used to back up data. You cannot use a DAT recorder whose playback data differs from the data as it was recorded; for example DAT recorders featuring internal digital signal processing.

** Portable DAT recorders may require a special adapter when connecting to the VS-1680's DIGITAL IN and OUT. Check the owner's manual for your DAT recorder, or consult your dealer or service center to find out what your model may require.*

Tape:

You can use conventional DAT tapes. However, 180-minute tapes are very thin, and may easily stretch or become tangled in the recorder. Avoid using 180-minute tapes. When you need more than one tape to do the backup, prepare whatever number of tapes you need, making sure that all of the tapes feature the same recording time. It is recommended that you write the numbers of the tapes to indicate the order in which they are used during the backup.

Audio equipment:

Turn down the volume of any connected audio devices while song data is being backed up. During DAT backups, no audio is output from the VS-1680's analog output jacks. The song data sent to the DAT recorder from the VS-1680 is a particular signal recorded on the drive. Monitoring this with the DAT recorder's volume raised may result in damage to your speakers, and may adversely affect your hearing.

II. Saving Song Data to DAT (Backup)

Use the following procedure to back up song data on the current drive.

1. Connect the VS-1680 and the DAT recorder as shown below.

Graphic p 141 left column

Graphic p 141 right column

2. Set the DAT recorder so it is able to record digital signals.

** Normally the sample rate at which song data is transmitted is set to 48kHz. This sample rate has no relation to the sample rate of the song data. If your DAT recorder requires you to set the sample rate, set it to 48 kHz.*

3. Hold [SHIFT] and press [F6(UTILITY)]. The Utility menu icon appears in the display.
4. Press [PAGE] so "DATBk" appears in the display above [F6]. Press [F6(DATBk)].

Graphic p 142 left column top

5. "Store Current ?" appears in the display. If you wish to save changes made to the current song, press [YES]; if not, press [NO].
6. Press [←], [→], [↑], and [↓] to move the cursor to "Source Song".
7. Use the TIME / VALUE dial to move the cursor to the song you want to copy and press [F3(MARK)]. By pressing [F2(ALL)], you can place and remove marks from all songs. Press [F1(SelSg)] to view a directory of songs. After marking songs, press [F1(Back)].

Graphic p 142 left column bottom

8. Press [←], [→], [↑], and [↓] to move the cursor. Set each of the values described below.

Digital Out Select

Select either "DIGOUT1" (coaxial) or "DIGOUT2" (optical).

Sample Rate

This sets the sample rate (48 kHz or 44.1 kHz) used during DAT backup. This sample rate has no relation to the sample rate of the song data. This defaults to 48 kHz.

Backup Wait

When this is set to "On", the data transmission speed will be slower. Turn this on when using an external drive (such as a Zip drive) whose data read / write speed is slower. When this is set to "On", although it takes longer for the backup to finish, problems resulting from the data transfer (such as data loss) are minimized. This defaults to "Off".

Tape Length

Specify the interval at which the backup will be paused in order to change tapes. Set this so the interval is no less than about five minutes shorter than the length of tape on which you are recording. When using tapes with different recording lengths, set this to the recording time of the shortest tape.

9. The approximate time it will take and the number of tapes needed to back up the data are indicated in the display. Make sure you have the correct number of tapes.
10. Press [F4(Exec)]. A confirmation message appears in the display.
11. Press [YES]. "Please Rec DAT" appears in the display.
12. Put the DAT recorder in record standby and press [YES] once more.
13. If you cannot back everything up on one tape, the operation is carried out for the length of time designated in "Tape Length". Insert the next tape into the DAT recorder and again put it in record standby, and then press [YES]. The backup procedure continues in this fashion. Write the tape numbers on the labels in the order they are backed up.
14. When the backup procedure is finished, "Please Stop DAT" appears in the display. Stop the DAT recorder and press [YES].
15. Press [PLAY(DISPLAY)] to return to the Playlist display.

** If you wish to cancel the backup, press [EXIT(NO)]. This cancels the process, even if done during the backup itself. Song data recorded to a DAT up to that point cannot be loaded into the VS-1680.*

** To check whether or not a backup has been performed correctly, we recommend you carry out the Verify procedure (p. xx).*

Tape Quantity Needed for DAT Backup

One 60-minute tape can back up approximately 330 MB of song data. For example, you would need four 60-minute (or two 120-minute) tapes to back up 1000MB of song data. Check the display to see the number of tapes needed to do the backup.

Time Needed to Backup

It takes about 60 minutes to backup 330 MB of song data. Backing up 1000 MB of song data takes about 190 minutes. However, if the number of songs being backed up is high compared to the total MB size of the data, it may take longer.

III. Recovering Data from DAT

A. DAT Recover

Use the following procedure to load song data that was backed up to a DAT recorder. If two or more songs were saved together during the backup, the data of all songs will be loaded.

** You can recover VS-880 song data backed up using DAT backup. However you cannot edit or resave the recovered data on the VS-1680. If you wish to edit VS-880 song data with the VS-1680, convert it to VS-1680 song data and create a copy.*

1. Connect the VS-1680 and the DAT recorder as shown below.

Graphic p 143 right column top

Graphic p 143 right column bottom

2. Insert the tape which contains the song data into the DAT recorder. If the song data is backed up on two or more tapes, insert the first tape.
3. Rewind the tape to begin playback from the beginning of song data.
4. Hold [SHIFT] and press [F6(UTILITY)]. The Utility menu icon appears in the display.
5. Press [PAGE] so "DATRc" appears in the display above [F1]. Press [F1(DATRc)].

6. Press [⇐], [⇒], [↑], and [↓] to move the cursor. Set each of the values described below.

Digital In Select

Select either "DIGIN1" (coaxial) or "DIGIN2" (optical).

Erase All Songs

When this is set to "On", the destination drive is initialized before the recover procedure is carried out. **This will erase all songs from the destination drive.** If you want to recover a song from DAT without erasing any songs on the current drive, leave this setting to "Off".

7. Press [F4(Exec)].
8. "STORE Current ?" appears in the display. Press [YES] to save changes to the current song. Or press [NO].
9. "Please Play DAT" appears in the display. Put the DAT recorder in play.
10. The data begins to load. If you have backed up data to multiple tapes, the operation will suspend when the end of each tape is reached. Insert the next number tape as indicated in the display, press [YES], and start the DAT recorder playing again.
11. When the backup procedure is finished, "Please Stop DAT" appears in the display. Stop the DAT recorder and press [YES].
12. Press [PLAY(DISPLAY)] to return to the Playlist display.

B. Canceling the Recover Operation

You can cancel the recover operation by pressing [EXIT(NO)] during the recover. When there is an error in song data backed up on a tape, the recover operation is temporarily halted. In such instances, you can choose whether to leave or delete the unfinished song data recovered up to that point.

** This procedure does not correct the drive error, but tries to restore the song and save as much of the data which does not have errors as possible. Depending on the location where the error occurred, some noises may be generated, or settings for the mixer, tempo map, sync track may be lost.*

** Loud noises may damage your amplifier and speakers. Turn down the headphones and master volume of the VS-1680 when you check errors in the song data.*

C. Canceling a DAT Recovery Operation in Progress

1. Press [EXIT(NO)] during the DAT recovery. Recovery is stopped, and "Delete Err Song?" (Delete the song containing the error?) appears in the display.
2. If you would like to delete from the hard drive the song data that stopped the recovery operation, press [YES]. If you would like to keep it as it is, even though the recovery is not completed, press [NO].

D. When an Error is Found in the Song Data

1. If an error is found in song data which was recovered with the DAT recovery operation, "Recover Err Retry ?" (An error was found, Retry the recovery?) appears in the display.
2. If you want to recover the data, press [YES]. If you want to cancel the recovery, press [NO].
3. If you press [NO] in Step 2, "Delete Err Song ?" appears in the display.
4. If you would like to delete the song data from the hard drive, press [YES]. If you would like to keep it as is even though the error is included, press [NO].

IV. Checking DAT Tape Contents

This operation lets you view names of songs saved to a DAT tape. Even if you have saved the data of two or more songs in a single backup operation, you can check the name of each song.

1. Connect the VS-1680 and the DAT recorder as shown below.

Graphic p 145 left column

Graphic p 145 right column top

2. Insert the tape which contains the song data into the DAT recorder. If the song data is backed up on two or more tapes, insert the first tape.
3. Rewind the tape to begin playback from the beginning of song data.
4. Hold [SHIFT] and press [F6(UTILITY)]. The Utility menu icon appears in the display.
5. Press [PAGE] so "DATRc" appears in the display above [F1]. Press [F1(DATRc)].
6. Press [↔] to move the cursor to "Digital In Select" and rotate the TIME / VALUE dial.

Digital In Select

Select either "DIGIN1" (coaxial) or "DIGIN2" (optical).

7. Press [F1(Name)]. "Please Play DAT" appears in the display.
8. Put the DAT recorder in play. The song name will load.
9. When the procedure is finished, "Please Stop DAT" appears in the display. Stop the DAT recorder and press [YES]. The DAT Name screen appears in the display.

Graphic p 146 left column top

10. If you wish to end the operation after checking the song names, press [PLAY(DISPLAY)] to return to the Playlist display.
11. If you recover specified song data, then press [↔] to move the cursor to "source Song".
12. Mark the songs you want to recover. Use the TIME / VALUE dial to move the cursor to the song you want to recover, then press [F3(MARK)]. You can choose more than just one song to recover. By pressing [F2(ALL)], all songs will be marked for recovery.
13. By pressing [F1(SelSg)] to display a directory of songs. You can check the time and date any song was created or edited by pressing [F5(TIME/DATE)]. In this screen, press [F3(MARK)] to chose the songs you want to recover, then press [F1(Back)].

Graphic p 146 left column bottom

Erase All Songs

When this is set to "On", the destination drive is initialized before the recover procedure is carried out. **This will erase all songs from the destination drive.** If you want to recover a song from CD-R without erasing any songs on the current drive, leave this setting to "Off".

Graphic p 127 left column top

14. Press [F4(Exec)].
15. If the selection for Erase All Songs is "Off", then "Store Current ?" appears in the display. Press [YES] to store changes made to the current song. Or, press [NO] if you don't want to save changes made to the current song.
16. "Please play DAT" appears in the display. Rewind the tape and put the DAT recorder in play mode.
17. The data begins to load. If you have backed up data to multiple tapes, the operation will suspend when the end of each tape is reached. Insert the next number tape as indicated in the display, press [YES], and start the DAT recorder playing again.
18. When the backup procedure is finished, "Please Stop DAT" appears in the display. Stop the DAT recorder and press [YES].
19. Press [PLAY(DISPLAY)] to return to the Playlist display.

** To cancel the DAT recover operation, press [EXIT(NO)].*

V. DAT Backup Verify

This operation checks the condition of song data that was recorded to a DAT tape. It does not perform a comparison of the song data on the hard drive and the song data on the tape. If results of the DAT verify operation warns that data is not recorded properly, it is possible the tape has been scratched or stretched. If the original song data still exists on the drive, perform the DAT backup procedure once again using a different DAT tape.

** After performing DAT backups, in order to confirm the data indeed has been properly backed up, we recommend you carry out the Verify procedure.*

1. Connect the VS-1680 and the DAT recorder as shown below.

Graphic p 145 left column top (optical)

Graphic p 147 left column bottom (coaxial)

2. Insert the tape which contains the song data into the DAT recorder. If the song data is backed up on two or more tapes, insert the first tape.
3. Rewind the tape to begin playback from the beginning of song data.
4. Hold [SHIFT] and press [F6(UTILITY)]. The Utility menu icon appears in the display.
5. Press [PAGE] so "DATRc" appears in the display above [F1]. Press [F1(DATRc)].
6. Press [↔] to move the cursor to "Digital In Select" Use the TIME / VALUE dial to make the choice for "Digital In Select".

Digital In Select

Select either "DIGIN1" (coaxial) or "DIGIN2" (optical).

7. Press [F2(Verify)]. "Please Play DAT" appears in the display.
8. Put the DAT recorder in play.
The Verify process begins. If you have backed up data to multiple tapes, the operation will suspend when the end of each tape is reached. Insert the next number tape as indicated in the display, press [YES], and start the DAT recorder playing again.
9. When the verify procedure is finished, "Please Stop DAT" appears in the display. Stop the DAT recorder and press [YES].
10. If there is no problem with the condition of the recorded song data, "Complete" appears in the display. If a warning message appears when the song data is loaded, then that song data cannot be loaded correctly. If you

wish to check a tape again, insert the number tape indicated in the display, press [YES] and start the DAT recorder in playback. Press [NO] if you want to finish the procedure without checking the tape again.

** To cancel the Verify operation, press [EXIT(NO)].*