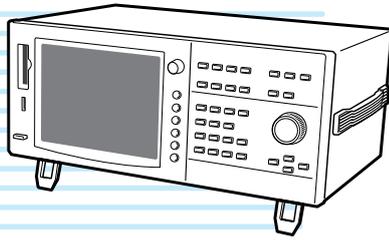**KIKUSUI** PART NO. Z1-005-070, IA004822
Feb. 2011

Firmware Update Guide

for KHA1000/KHA3000

This manual describes how to update the KHA1000/KHA3000 firmware.

Package Contents

	Quantity
Update Kit KHA (CD-ROM)	1
Firmware Update Guide (this manual)	1

Be Sure to Read the Following

When you update the firmware, be sure to follow the precautions listed below. If you ignore these precautions, the firmware may not be updated correctly, and the KHA1000/KHA3000 may need to be repaired.

⚠ **Caution**

- Only use the standard features of your Windows operating system (Windows Explorer) to copy the firmware file. If you use a commercially available file management tool, the firmware file may not be copied correctly.

- During the update process, be careful not to disconnect the power line from the KHA1000/KHA3000.

- After the update process has completed, reset the KHA1000/KHA3000 to its factory default settings. If you do not start the KHA1000/KHA3000 with the factory default settings, it may malfunction.

Items That Are Necessary to Update the Firmware

- CompactFlash card that has a capacity less than or equal to 512 MB

  CompactFlash cards that have a capacity greater than 512 MB cannot be recognized. Refer to the KHA1000/KHA3000 user's manual, and whenever possible, use a CompactFlash card whose operation has already been confirmed (see the listed manufacturer name, model number, and capacity information in the operation manual).

- Update Kit KHA (CD-ROM)

- Windows PC that can handle CompactFlash cards

  Use the Windows 2000 or later operating system. You cannot use any other operating systems.

Update Procedure

First confirm that the CompactFlash card is operating normally. Then, copy the firmware file that is on the CD-ROM to the CompactFlash card.

Next, insert the CompactFlash card into the KHA1000/KHA3000, and update the firmware.

Finally, restart the KHA1000/KHA3000 with the factory default settings, and reset the settings as necessary.

Confirming that the CompactFlash card is operating normally

First, confirm that data can be read from and written to the CompactFlash card correctly.

1 Insert the CompactFlash card into the KHA1000/KHA3000 MEMORY slot.

2 Press HA.

3 Press START.
You do not have to connect an AC power supply.
It is okay if tests stop because of a reason such as PLL being unlocked.

4 Press F1 (Save).
The data is saved to the CompactFlash card.

5 Press F2 (Report Print).
The data is saved to the CompactFlash card.

6 Remove the CompactFlash card from the KHA1000/KHA3000 MEMORY slot.

7 Use a PC to view the data on the CompactFlash card.
Check that the following files are present in the HARES\[date that data was saved] folder, HAPDFxxx.PDF and HARESxxx.HR.

If either of these files is not present, the CompactFlash card may not be operating properly. Use a different CompactFlash card.

⚠ **Caution**

Do not use a CompactFlash card that is not operating normally to update the firmware. If you ignore this precaution, the firmware may not be written to the KHA1000/KHA3000 correctly, and the KHA1000/KHA3000 may need to be repaired.

Copy the firmware file to the CompactFlash card.

After you have confirmed that the CompactFlash card is operating normally, copy the firmware file (KHA1000.bin or KHA3000.bin) from the CD-ROM to the card's root directory.

Update the firmware

To update the firmware, you have to reset the KHA1000/KHA3000 to its factory default settings. If you are using the Harmonics Explorer application software, we recommend that you write down the communication settings.

> ⚠ **Caution**
>
> After the update process has completed, start the KHA1000/KHA3000 with its factory default settings. If you do not start the KHA1000/KHA3000 with the factory default settings, it may malfunction.

1 **Insert the CompactFlash card that has the firmware file from the CD-ROM into the KHA1000/KHA3000 MEMORY slot.**

2 **While holding down ENTER, turn the power switch on.**
The KHA1000/KHA3000 starts with the factory default settings.

3 **Press SYSTEM.**

4 **Press F6 (Prev/Next) to select page 3/3.**

5 **Press F4 (Version up).**
A confirmation dialog box with the message "Wish to execute?" will be displayed.

6 **Press F1 (Yes).**
The update process begins. Do not turn the power off while files are being written to the KHA1000/KHA3000.

The update process will be completed in approximately 3 minutes. You cannot cancel or abort the process.

When the update process is completed, a chime sounds, and a dialog box with the message "Restart instrument while pressing ENTER key" is displayed.

7 **Wait at least 5 seconds after this dialog box appears, and then turn the power switch off.**

8 **Wait at least 5 seconds after you turn the power switch off, and then, while holding down ENTER, turn the power switch on.**
The KHA1000/KHA3000 starts with the factory default settings.

Reset the settings after the update process is completed

Check the firmware version. If you are using the Harmonics Explorer application software, reconfigure the settings.

1 **Press SYSTEM.**

2 **Check the firmware version.**

3 **If you are using Harmonics Explorer, press F2 (I/F Setting) to configure the settings.**

This completes the firmware update process.

If your KHA1000/KHA3000 doesn't start even though you followed the procedure written here or if there are any items that are not clear, contact your Kikusui agent or distributor.

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The newest version of the operation manual can be downloaded from Download service of Kikusui website.