# TC·HELICON
## VOCAL TECHNOLOGIES

# VoiceCraft
## HUMAN VOICE MODELING CARD

# Installation Procedures

## CAUTION

These servicing instructions are for use by qualified service personnel only.  To reduce the risk of electric shock do not perform any servicing other than that contained in the operating manuals unless you are qualified to do so.

## Important Please Read

This upgrade procedure overwrites all presets that were in the unit prior to upgrading.  Users who want to keep presets written prior to the upgrade must backup presets using the procedure in the VoicePrism manual.   These backed up presets may be uploaded to the unit with the VoiceCraft card following installation of hardware and software.

The VoiceCraft upgrade card has both hardware and software components.  Software may be installed by *either* of two methods, by MIDI or by replacing a ROM chip on the VoicePrism.

## Option 1:
## Upgrade Procedure Using ROM Replacement To Update Software

*Requires proper PLCC IC puller tool and #2 Philips screw driver*

1. Unplug the power cable from the VoicePrism.
2. Remove the top cover of the VoicePrism by removing 7 screws.
3. Using an IC puller, remove the ROM from location U38 on the main board of the VoicePrism, as indicated in Figure 1.
4. Before *pressing* into the socket, *place* the supplied ROM in the socket ensuring that:

    - The beveled corner of the ROM is oriented correctly with the beveled corner on the socket.
    - The ROM is laying flat with all pins correctly lined up in the socket.

5. Now press the ROM into the socket.
6. Remove the back plate on the VoicePrism reserved for the VoicePrismPlus expansion card by removing 4 screws.
7. Press the plastic standoff into the hole labeled MTH4 on the main circuit board in the VoicePrism.
8. The red stripe on the ribbon cable connected to the VoiceCraft card indicates pin 1. Align the connector on the ribbon cable with J12 header on the VoicePrism main board making sure that pin 1 on the cable is oriented correctly with pin 1 of J12.
9. CAREFULLY press the ribbon cable connector onto J12.
10. Position the VoiceCraft card so that the standoff is aligned with the corresponding hole on the VoiceCraft Card.
11. Press the VoiceCraft card down so that the standoff presses into the card.
12. Attach the plate of the VoiceCraft card to the back panel of the VoicePrism using 4 screws removed earlier.
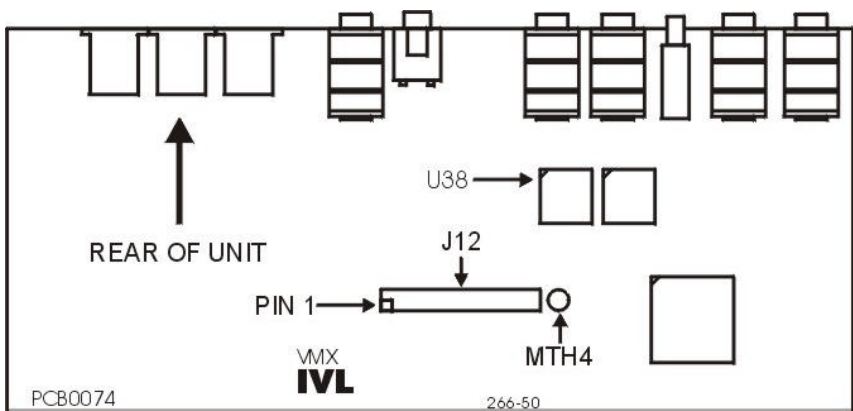13. Put the top cover back on to the VoicePrism using 7 screws removed earlier.



**Figure 1 -  VoicePrism Main Board**

## *Option 2:*
## *Upgrade Procedure Using MIDI to Update Software*

### *Requires #2 Philips screw driver*

1. Unplug the power cable from the VoicePrism.
2. Remove the top of the VoicePrism by removing 7 screws.
3. Remove the back plate on the VoicePrism reserved for the VoicePrismPlus expansion card by removing 4 screws.
4. Press the plastic standoff into the hole labeled MTH4 on the main circuit board in the VoicePrism, as indicated in Figure 1.
5. The red stripe on the ribbon cable connected to the VoiceCraft card indicates pin1.  Align the connector on the ribbon cable with J12 header making sure that pin 1 on the cable is oriented correctly with pin 1 of J12.
6. CAREFULLY press the ribbon cable connector onto J12.
7. Position the VoiceCraft card so that the standoff is aligned with the corresponding hole on the VoiceCraft Card.
8. Press the VoiceCraft card down so that the standoff presses into the card.
9. Attach the plate of the VoiceCraft card to the back panel of the VoicePrism using 4 screws removed earlier.
10. Put the top cover back on to the VoicePrism using 7 screws removed earlier.
11. Plug the power cable into the VoicePrism and power up the unit.
12. Make note of the current version number (press the **Utility** button and tab to the **Version** page).
13. Tab to the **Upgrade** page, one page to the right of **Version**.
14. Enter the upgrade code '**H**', '**V**', '**K**'.
15. Press soft knob 1 and select '**EXECUTE**' from the popup menu.
16. A message box titled "**ARE YOU SURE**" will be displayed.  If you want to proceed select '**YES**' and press soft knob 1.

*Note: proceeding with the upgrade will not only remove the software but also clear all user presets and preference settings.*

17. Another message box titled "**PROCEED WITH UPGRAGE**" will be displayed.  If you are certain you want to proceed select '**OK**'. Selecting '**CANCEL**' will stop the upgrade process.

18. If you decided to continue, your VoicePrism should be displaying a message saying "YOU MAY START UPLOAD…" (see Figure 2).



**Figure 2 - Upload Screen**

19. Using a software application capable of sending MIDI such as MIDI-OX or CakeWalk Pro load the "ClearFlash.syx" file.

20. Transmit the file and wait for at least 10 seconds. It takes a few seconds to erase the flash.

21. Load "VP+*xxx*.syx" where *xxx* represents the current version number.  If you are using MIDI-OX make sure that there is a 60 ms delay after each F7 (one of the options in the Sysex, Configure dialog box in MIDI-OX, see Figure 3 for an example). This might not be absolutely necessary, depending on the type of MIDI device you are using.
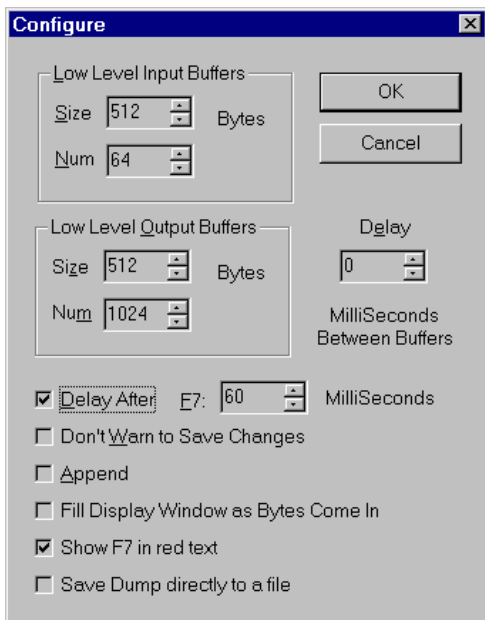
**Figure 3 - Sample MIDI-OX Sysex Configuration**

22. Transmit the file.
23. When the file has been sent, your VoicePrism should reset automatically.
24. Confirm that the new software has been loaded by checking the version number again.

## Troubleshooting

If there was a power failure, transmission error, or any other reason the upgrade did not complete properly, turn the VoicePrism off and on. If the old software is still present, you should see the main screen as usual. Simply start the upgrade process from the beginning. If the unit powers on and nothing happens, start the upgrade procedure by resending the "ClearFlash.syx" file (step 19) and continue with the upgrade procedure from there.

### BIST (Built In Self Test)

1. Press the **Power** switch to turn on the VoicePrism.
2. Press and hold the **Left Arrow**, **Preview** and **Store** buttons within 3 seconds of power up until the LCD Display appears filled. Note: VoicePrism will not enter BIST mode if there are cables attached to any of the MIDI jacks on the back panel.
3. Confirm LCD moves through the following stages:

    - Filled
    - Full screen grid
    - Grid on right half of screen
    - Grid on left half of screen
    - Full screen grid
    - Automatic BIST status

    *Note: If the patterns do not appear in the order indicated, or if the grid is incomplete, the unit fails the BIST. The above criteria are only confirmed visually. No other indication is given.*

4. Confirm the Automatic BIST status screen reads "**PASS**" beside the following headings: FPGA, Address Bus, Flash, Audio ROM, Bit Bus, RAM, EEPROM, 2181 DSP.
5. The LCD indication should read "**VISUAL CHECK**". If any of the headings do not appear this also indicates a failure.
6. Push the **Left Arrow**.
7. Confirm that the LCD now displays the Manual BIST status screen.
8. Confirm the 7 Segment Display reads "188".

9.  Confirm the MIDI and Lock indicators below the display and the input dB scale LED's are lit.
10. Push the **Right Arrow** button.
11. Confirm the 7 Segment Display, input dB scale and the MIDI and Lock indicators below the display turn off.
12. Rotate **Soft Knob #1** clockwise.
13. Confirm the corresponding value on the LCD Display increases.
14. Rotate **Soft Knob #1** counter clockwise.
15. Confirm the corresponding value on the LCD Display decreases.
16. Push **Soft Knob #1** until it clicks.
17. Confirm 'OK' appears on the corresponding line on the LCD Display.
18. Repeat steps 12 through 17 for **Soft Knob #1**, **#2** and **#3**.
19. Rotate the **Data Wheel** clockwise.
20. Confirm the corresponding value on the LCD increases.
21. Rotate the **Data Wheel** counter clockwise.
22. Confirm the corresponding value on the LCD decreases.
23. Rotate the **Data Wheel** counter clockwise until the **7 Segment Display** shows "1".
24. Rotate the **Lead** knob fully clockwise.
25. Verify that the value displayed beside **Lead** on the LCD is 127.
26. Rotate the Lead fully counter clockwise.
27. Verify that the value displayed beside **Lead** on the LCD is 0.
28. Repeat steps 23 through 27 for the **Harmony** and **Effects** knobs.
29. Confirm all labeled black buttons are lit.
30. Press each button once to turn off its LED.
31. Press the **Power** switch to turn off the unit and exit BIST mode.
    (*Note: **Input** and Headphone Level are analog, and therefore not tested in the BIST.*)

Notes