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V O C A L   T E C H N O L O G I E S TC-IVL Ventures Inc.

Service Bulletin

Date Issued	March 7, 2001
Products Covered	VoicePrism
Description	Manual update of XA and DIVA software

Details:
1. Before beginning, ensure that there is no power applied to the VoicePrism unit.
2. Ensure that both the unit and the worker are grounded, using necessary grounding mats and wrists straps.
3. Remove lid of VoicePrism unit by unscrewing the four screws on the top and the three screws on the rear of the unit.
4. Using a chip puller, remove the chips from sockets marked U28 and U38 on the VoicePrism main board, as detailed in Drawing #1.
5. Insert the chip marked "VMX_A306" into socket U28, ensuring that the marker indicating pin one is facing the rear of the unit. *(Note: this is the software programmed onto the 27C020 chip.)*
6. Insert the chip marked "VMXP103" into socket U38, ensuring that the marker indicating pin one is facing the rear of the unit. *(Note: this is the software programmed onto the 29F040 chip.)*
7. Replace lid of VoicePrism unit by screwing in the four screws on the top and the three screws on the rear of the unit.
8. To prove the functionality of the unit, run the BIST and MIC tests as detailed on page 2.
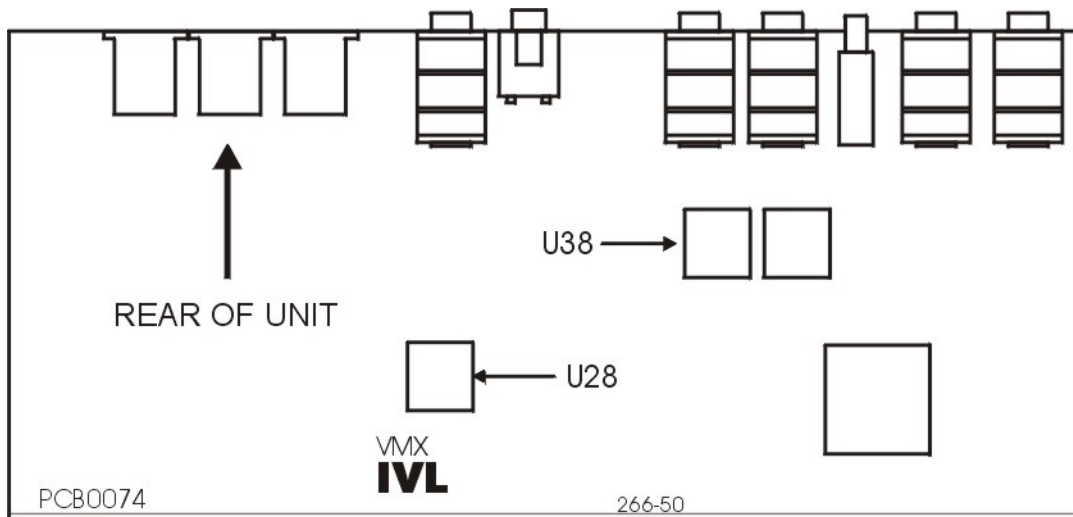
DRAWING #1: VoicePrism Main Board

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BIST and MIC Tests:

1 Apply power to the VoicePrism unit.
2 Press the **Power** switch to turn on the unit.
3 Insert a cable, with microphone attached, into the MIC Input on the front panel.
4 Insert a cable, with headphones attached, into the headphone output on the front panel.
5 Rotate Lead, Harmony, Effects, Input and Headphone Level to 12 o'clock.
6 Ensure that "Harmony" and "MIC On" are lit and that "48V" and "Bypass" are not lit.
7 Speak into the microphone and confirm that your voice, with added harmony, is audible through the headphones.
8 Remove the microphone and headphone cables from the front panel.
9 Press the **Power** switch to turn off VoicePrism.
10 Press the **Power** switch to turn on VoicePrism.
11 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*.
12 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

13 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.

14 Confirm the Automatic BIST status screen reads "PASS" beside the following headings:

FPGA	Addr Bus	Flash	Audio ROM
Bit Bus	RAM	EEPROM	2181 DSP

15 The LCD indication should read "VISUAL". If any of the headings do not appear this also indicates a failure.
16 Push the **Left Arrow** button**.**
17 Confirm that the **LCD** now displays the Manual BIST status screen.
18 Confirm the **7 Segment Display** reads "188".
19 Confirm the MIDI and Lock indicators below the display and the input dB scale LED's are lit.
20 Push the **Right Arrow** button.
21 Confirm the **7 Segment Display,** input dB scale and the MIDI and Lock indicators below the display turn off.
22 Rotate **Soft Knob #1** clockwise**.**
23 Confirm the corresponding value on the **LCD Display** increases.
24 Rotate **Soft Knob #1** counter clockwise.
25 Confirm the corresponding value on the **LCD Display** decreases.
26 Push **Soft Knob #1**until it clicks.
27 Confirm 'OK' appears on the corresponding line on the **LCD Display**.
28 Repeat steps 12 through 17 for **Soft Knob #2, 3** and **4**.
29 Rotate the **Data Wheel** clockwise.
30 Confirm the corresponding value on the **LCD** increases.
31 Rotate the **Data Wheel** counter clockwise.
32 Confirm the corresponding value on the **LCD** decreases.
33 Rotate the **Data Wheel** counter clockwise until the corresponding line on the **LCD Display** shows "1".

34 Rotate the **Lead** knob fully clockwise.
35 Verify that the value displayed beside **Lead** on the LCD is 127.
36 Rotate the **Lead** knob fully counter clockwise.
37 Verify that the value displayed beside **Lead** on the LCD is 0.
38 Repeat steps 23 through 26 for the **Harmony** and **Effects** knobs.
39 Confirm all labeled black buttons (PLS0025) are lit.
40 Press each button once to turn off its LED.
41 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.)*