

**Display**Date: **August 18, 1997**Subject: **NOTES ON PICTURE NOISE**Model: **PVM-14N1U/14N2U, SSM-14N1U**Serial No: **6,003,584 AND HIGHER (PVM-14N1U)**
6,002,302 AND HIGHER (PVM-14N2U)
6,002,572 AND HIGHER (SSM-14N1U)**DESCRIPTION**

Visible picture noise sometimes occurs due to

- Beat from the power supply
- Mis-clamp in a signal processor IC
- Quantization error in a signal processor IC
- Noise in a signal processor IC

In general, noise in a normal picture is not visible. Noise is visible only when a flat field signal or a multiburst signal is input. However, since noise is generated from the signal processor IC, it is impossible to reduce noise by improving the associated circuit. Therefore, the following helps keep noise level lower than that of the A board, suffix -14.

1. Beats from power supply—Beats from power supply are reduced by rerouting GND.
2. Mis-clamp in signal processor IC—buffering around affected signal processor IC is improved.
3. Quantization error—In analog to digital conversion, a quantization error may occur due to the performance of the AD converter as it relates to noise. Normally, such a quantization error is not visible; however, the error is visible when a flat field or ramp signal is input.
4. Signal processor IC noise—The signal processor IC used in these monitors has a single crystal oscillator rather than several crystal oscillators used in a multistandard IC, and its sampling clock runs freely. Because of this, a difference between sync signal and sample timing occurs, and synchronization takes place within the IC itself. However, variations in processing periodically occur, and the shift that occurs between sync signal and picture signal can result in horizontal stripes. However, noise is visible only when a particular signal such as a multiburst signal is input.