Gas Management Unit (GMS)

Reverse engineering of circuit boards contained within the GMS box.

- Gated Pulse Frequency Generator
- Analog Voltage Generator (K8) Patent WO 92/07861
- Variable Pulse Frequency Generator
    - My Circuit Analysis

Gated Pulse Frequency Generator

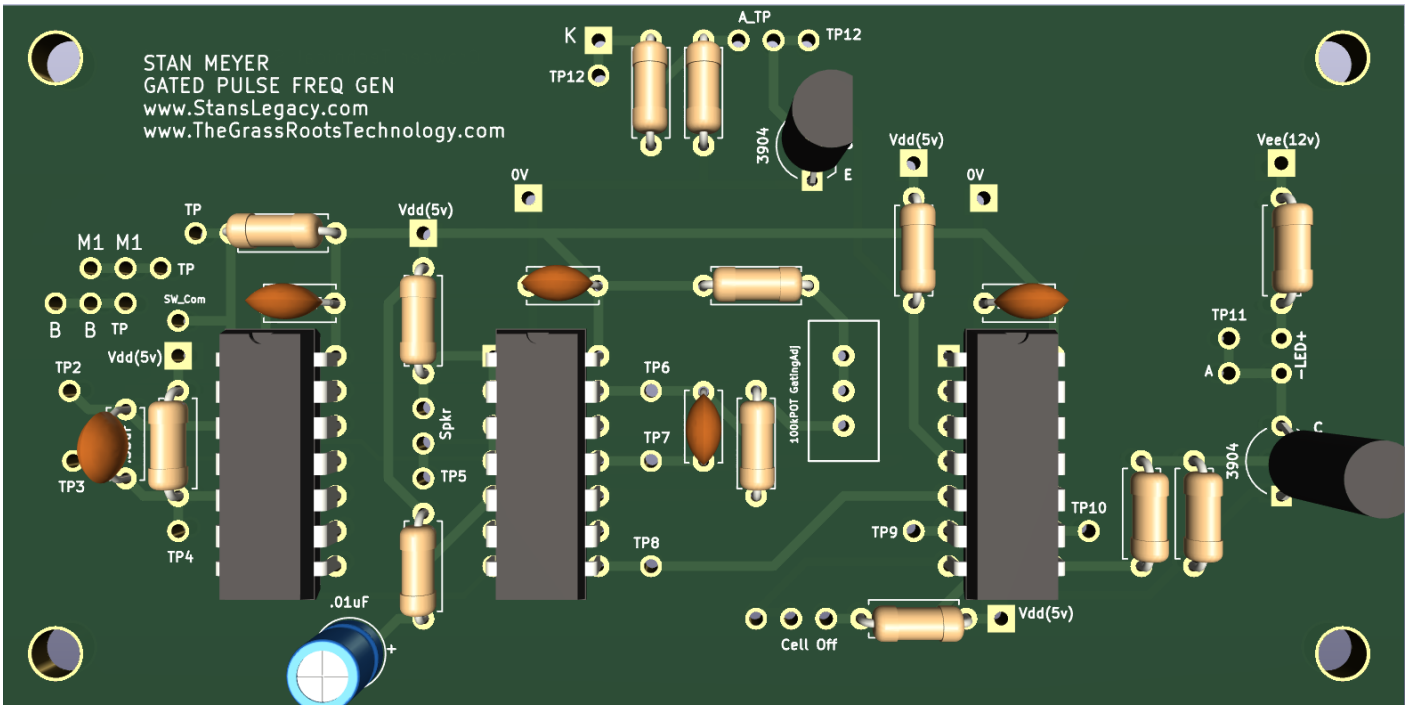
Updates to this analysis will continue as more experimental evidence becomes available (12-27-2022). Please note that initial diagrams/photos may change accordingly.

The Gated Pulse Frequency Generator (GPFG) is not located on the VIC circuit board. It is located within the Gas Management System (GMS) unit. However, it does interface with the VIC circuit boards.

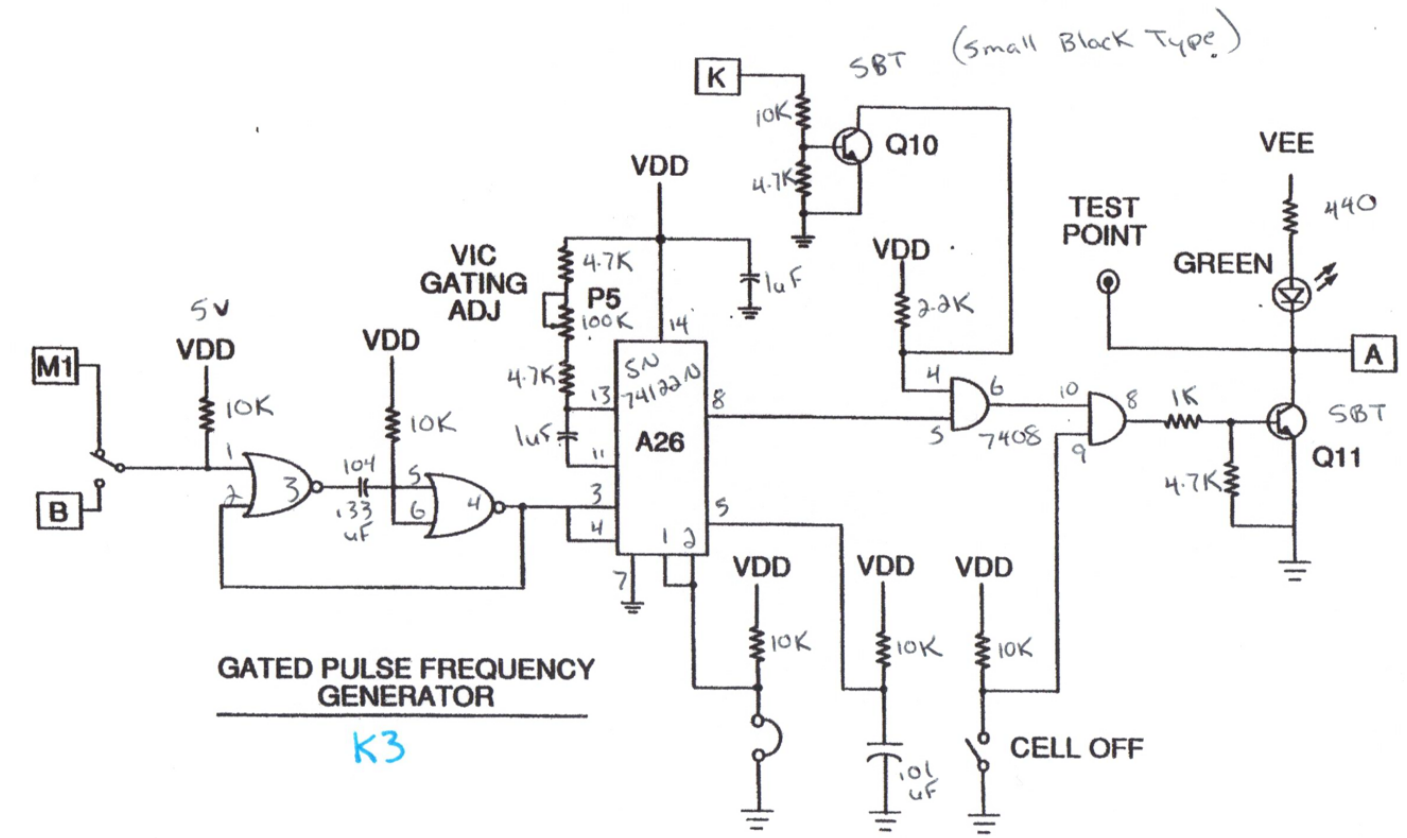
GMS UNIT LOCATION:

REPLICA PCB FOR TESTING:

PCB replica is 95% identical to patent schematic. Differences lie in the addition of decoupling capacitors across IC voltage supply to make ICs behave more stable.

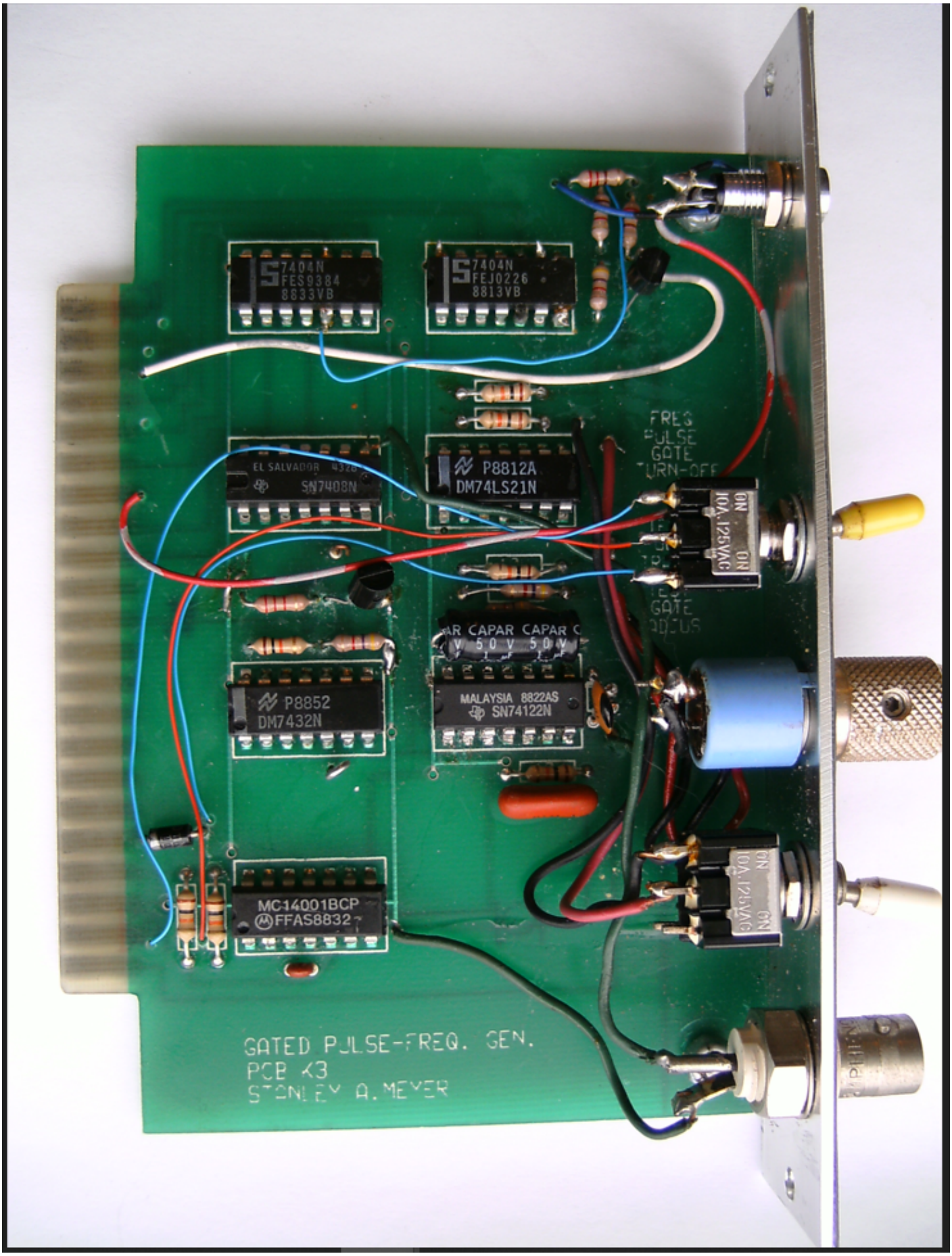


PATENT SCHEMATIC:

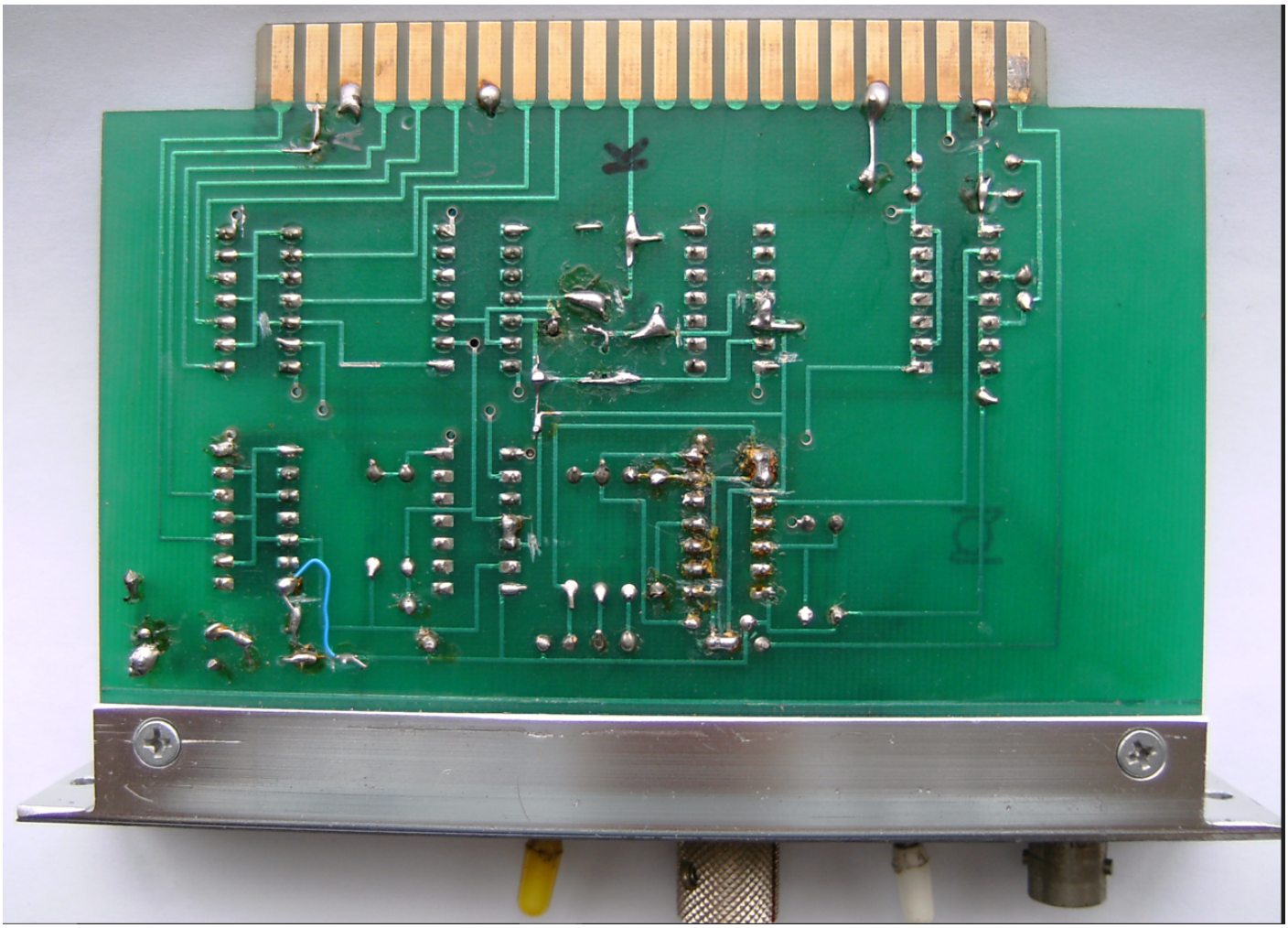


ORIGINAL CIRCUIT BOARD INTERFACE PLATE:

ORIGINAL CIRCUIT BOARD FRONT:



ORIGINAL CIRCUIT BOARD BACK:



Analog Voltage Generator (K8) Patent WO 92/07861

> Updates to this analysis will continue as more experimental evidence becomes available (12-27-2022). Please note that initial diagrams/photos may change accordingly.

According to the Birth Tech section, the Analog Voltage Generator's purpose is to produce the digital signal from the digital control means board into a voltage signal.

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"M" comes from Digital Control Means circuit. Its signal is applied to a series 1k-ohm resistor to the base of the 2N3906. This being a PNP BJT because the logic signal passed through an inverter prior to entering 2N3906 (see digital control means page). The 2N3906 produces a positive polarity, amplified signal. Signal goes through two other BJT stages, 2N3904 and another 2N3906 that are base biased configuration. "Manual Speed Calibration" is a simple potentiometer with wiper arm connected to a SPDT switch. This allows selection to inverting pin #2 of LM741 Op-Amp if desired.

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> Figure 1: Analog Voltage Generator is a part of Digital Control Means, in the GMS Unit.

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Variable Pulse Frequency Generator

My Circuit Analysis

YouTube video: Variable Pulse Frequency Generator