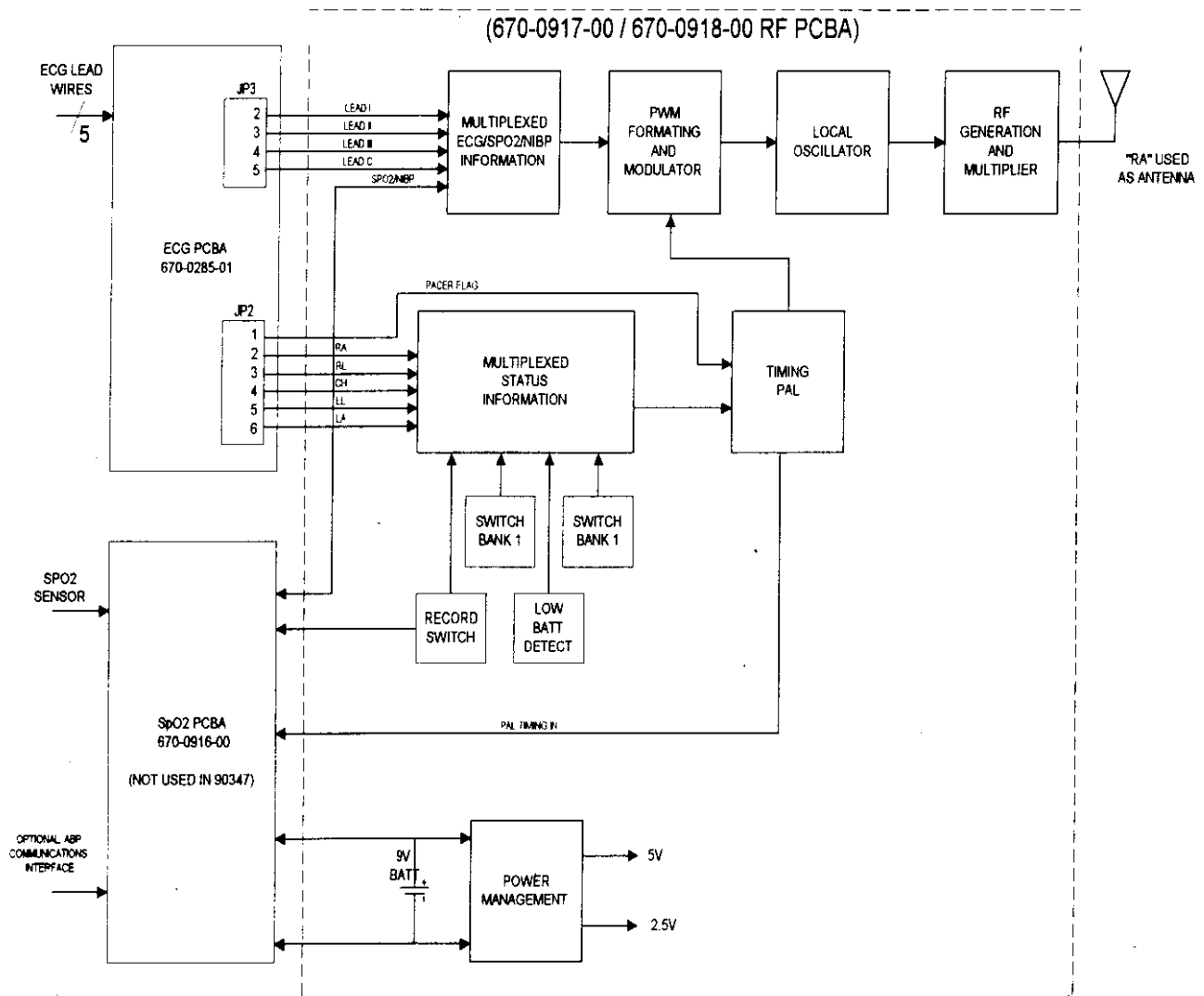


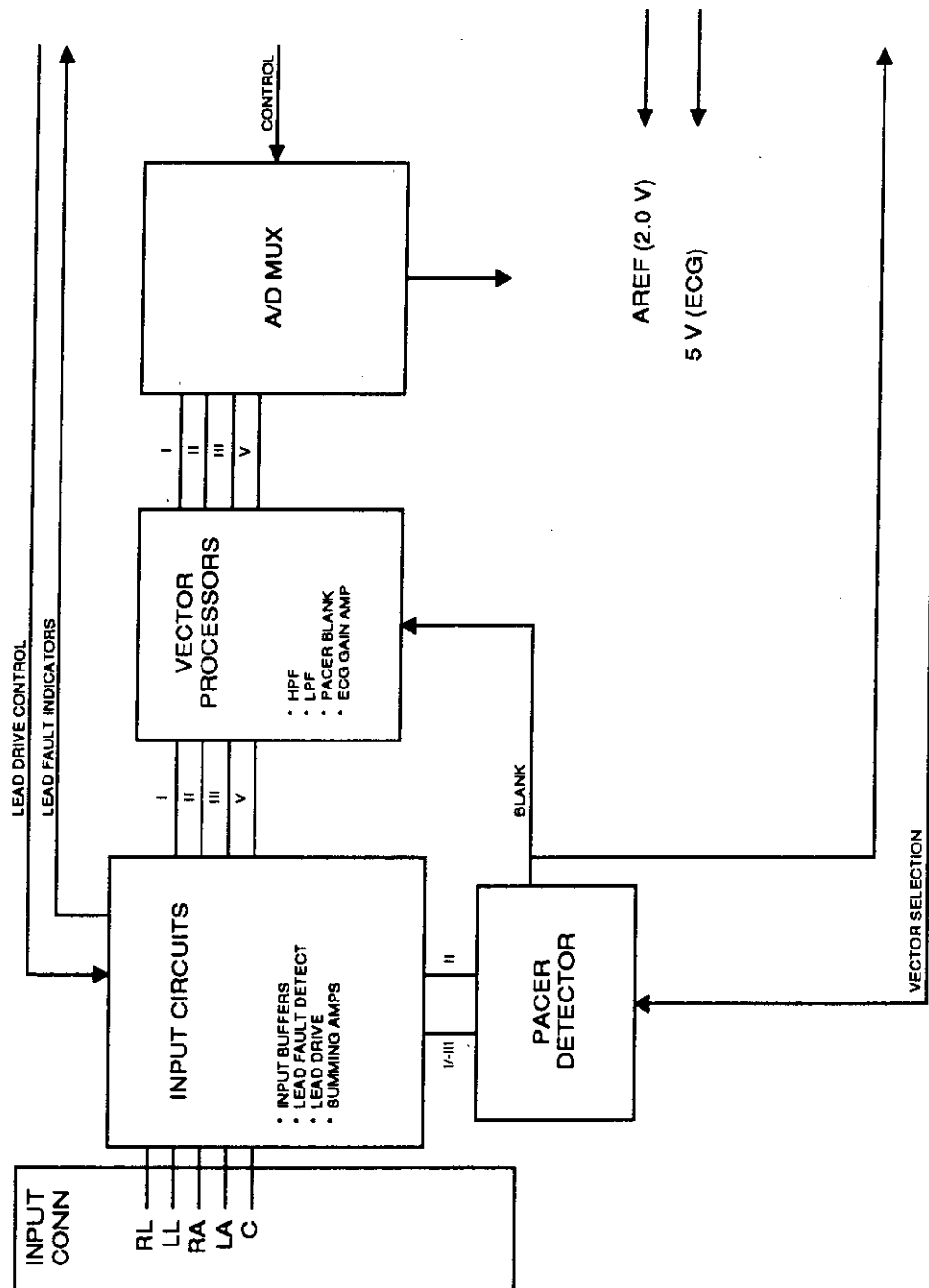
4.0 Block Diagram

MODEL 90343/90347 SYSTEM BLOCK DIAGRAM

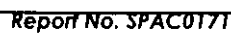


4.0 Block Diagram

ECG PCBA (670-0285-01) BLOCK DIAGRAM



Northwest EMC, Inc.



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SPACELABS MEDICAL INC.	
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REDMOND WA 98073	
Title	
MODEL 5003 5002 PICO BLOC OGRAM	
File Document Number	FILE
0	5002 BLOC OGRAM
	1-2

4.0 Block Diagram Description

General Overview

The Model 90343 consists of three major printed circuit board assemblies (PCBAs). The ECG PCBA (part number 670-0285-01) acquires the patient's ECG via skin electrodes that are interconnected to this PCBA through 5 lead wires. The ECG analog signal is conditioned and band-limited, and then routed to the RF PCBA (part number 670-0917-00: VHF low, 670-0918-00: VHF high).

The Model 90343 also includes a PCBA for acquiring and computing the patient's blood oxygen saturation value (SpO₂). This SpO₂ PCBA (part number 670-0916-00) interfaces with selected standard pulse oximetry sensors which emit red and infrared (Ir) light through a patient tissue bed that includes arterial blood flow. These light sources are detected by photodiodes embedded in the same sensor. The ration of the amount of absorbed red light to the amount of absorbed Ir light is used to compute the patient's blood oxygen saturation value and arterial pulse value. This PCBA is also used to communicate with a separate SMI patient monitoring product, the Model 90217 Ambulatory Blood Pressure (ABP) Monitor. The Model 90217 ABP monitor can be programmed to episodically or on demand, measure the patient's blood pressure non-invasively. This non-invasive blood pressure (NIBP) value is stored in the Model 90217. This NIBP value can also be transferred to the Model 90343 via a communications port on each product. The Model 90347 is identical to the Model 90343, except it does not include the SpO₂ PCBA. All other PCBAs are the same between both products.