

SECTION I

INTRODUCTION

1.1 SYSTEM DESCRIPTION

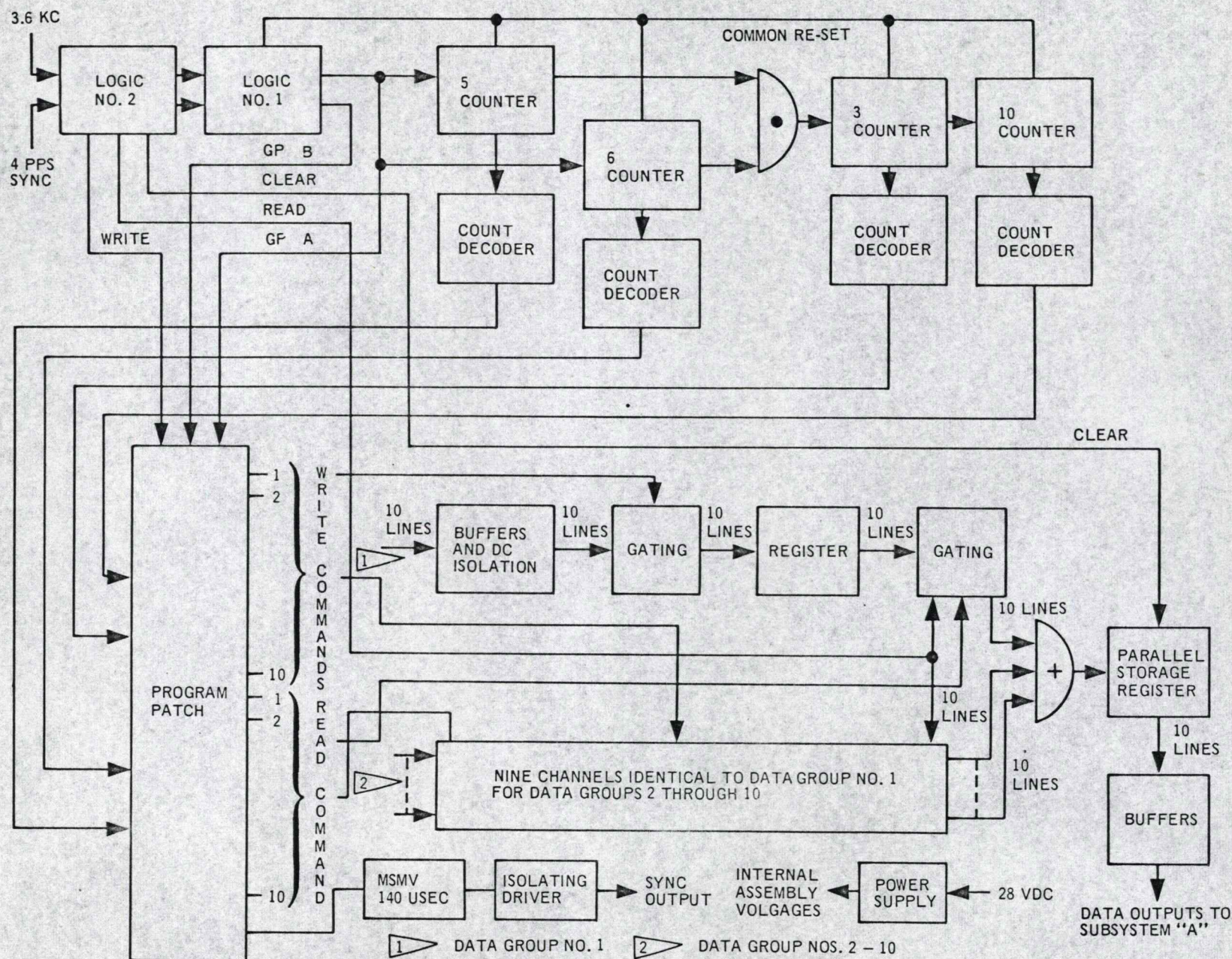
The Remote Digital Multiplexer, Model 410 (RDM-410) is designed to accept 10, ten-bit parallel words, and transfer this data to the PCM/DDAS Assembly, Model 301 (PCM-301) according to a programmed format. The system logic operates in synchronism with the PCM-301 so that digital words may be inserted into any available PCM/DDAS format time slot. To accomplish this, the RDM-410 performs the following functions:

- a. Synchronizes internal timing with the PCM-301 timing.
- b. Provides flexible patch programming for inserting data words into the PCM/DDAS format.
- c. Accepts any data group into temporary storage during time slots determined by multiplexer programming.
- d. Transfers stored data groups to the output register at a time determined by multiplexer programming.
- e. Provides an output pulse for synchronizing data sources.
- f. Provides a parallel ten-bit input to the PCM-301.

Figure 1-1 is the system diagram for the RDM-410. The RDM-410 receives a 3600-Hz signal and a 4-PPS synchronization signal from the PCM-301. The 3600-Hz signal is buffered, restored, and is the system logic clock pulse. The 4-PPS signal generates 4 reset pulses which synchronize the counters within the RDM-410 with those within the PCM-301. The system logic consists of two logic cards and four asynchronous binary counters. The decoded counter outputs, in combination with internally generated commands, define the time slot and rate of the data to be sampled.

The RDM-410 accepts up to 10, ten-bit parallel inputs. A magnetic core register (MCR) card is provided for each ten-bit input. Internally generated commands cause the MCR cards to transfer the data to the Parallel Storage Register (PSR) card where it is available for the PCM-301.

Figure 2-1. Remote Digital Multiplexer, Model 410, Functional Flow Block Diagram



MULTIPLEXER MODEL-410 ASSEMBLY

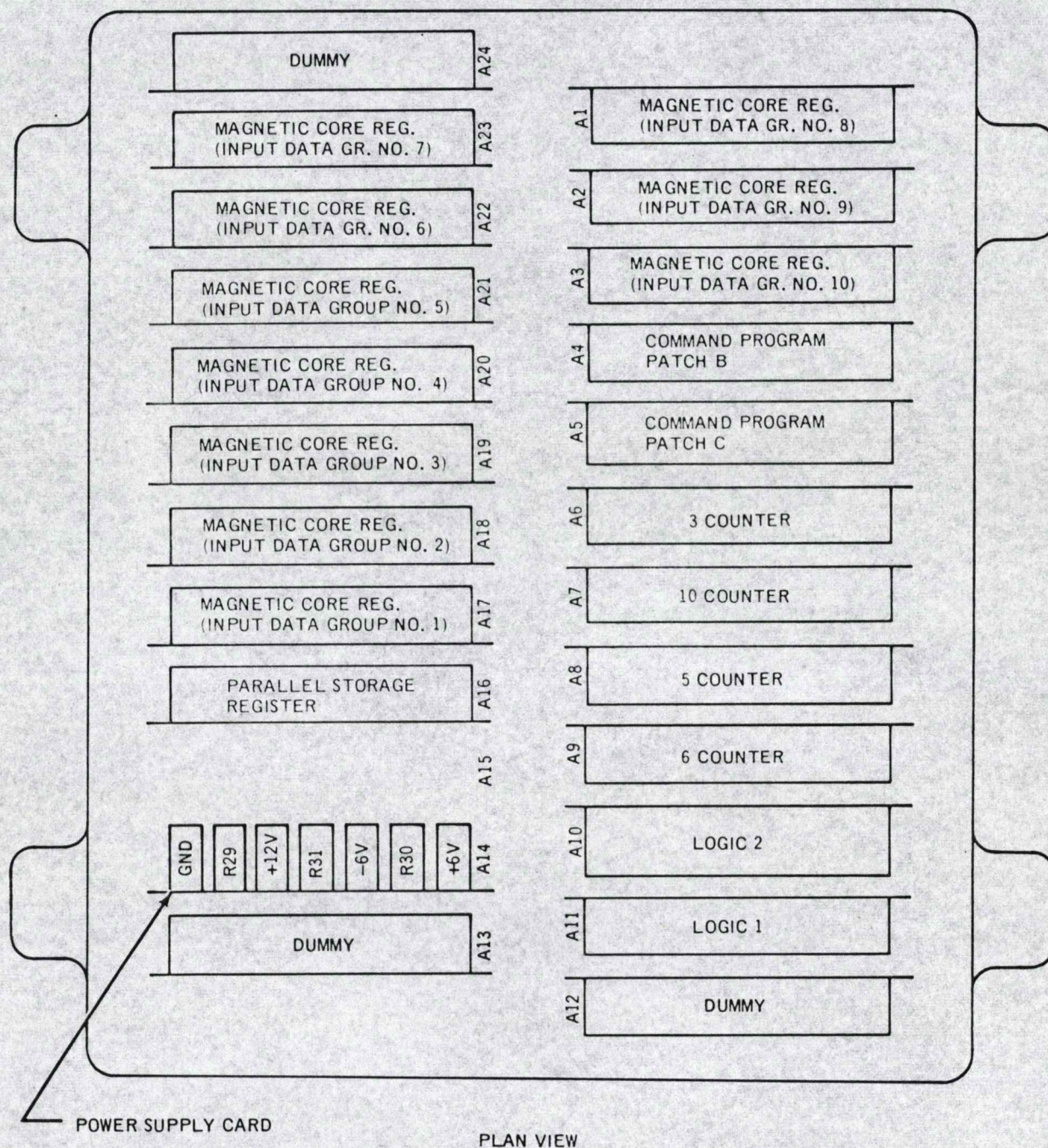


Figure 6-2. PC Board Orientation