MODEL 6052L

CPU CARD

The 6052L is the Central Processing Unit which communicates with and controls the Model 6272L Dual 70 Volt 100 Watt Power Amplifier Card and Model 6282L Dual 8 Ohm 100 Watt Power Amplifier Card.

The microprocessor on the 6052L card has a built-in Inter-Integrated Circuit (I^2C) serial bus interface which is used as the master on an I^2C bus which communicates with all amplifier cards in the system. The 6052L sends commands to and receives data from the controlled amplifier cards over the I^2C bus .The I^2C bus is physically located on the mother board and connects with all amplifier card slots in the 6160L Mainframe.

Built into the microprocessor is a full duplex UART which is used as the external serial interface. The serial interface can be configured for RS232, RS422, or RS485 communications. Sub-D connectors are provided on the rear of the 6160L mainframe for external connection to the serial port. For RS232, one connector is provided. For RS422 or RS485 there are two, one for input and the other for output or loop through. Through this

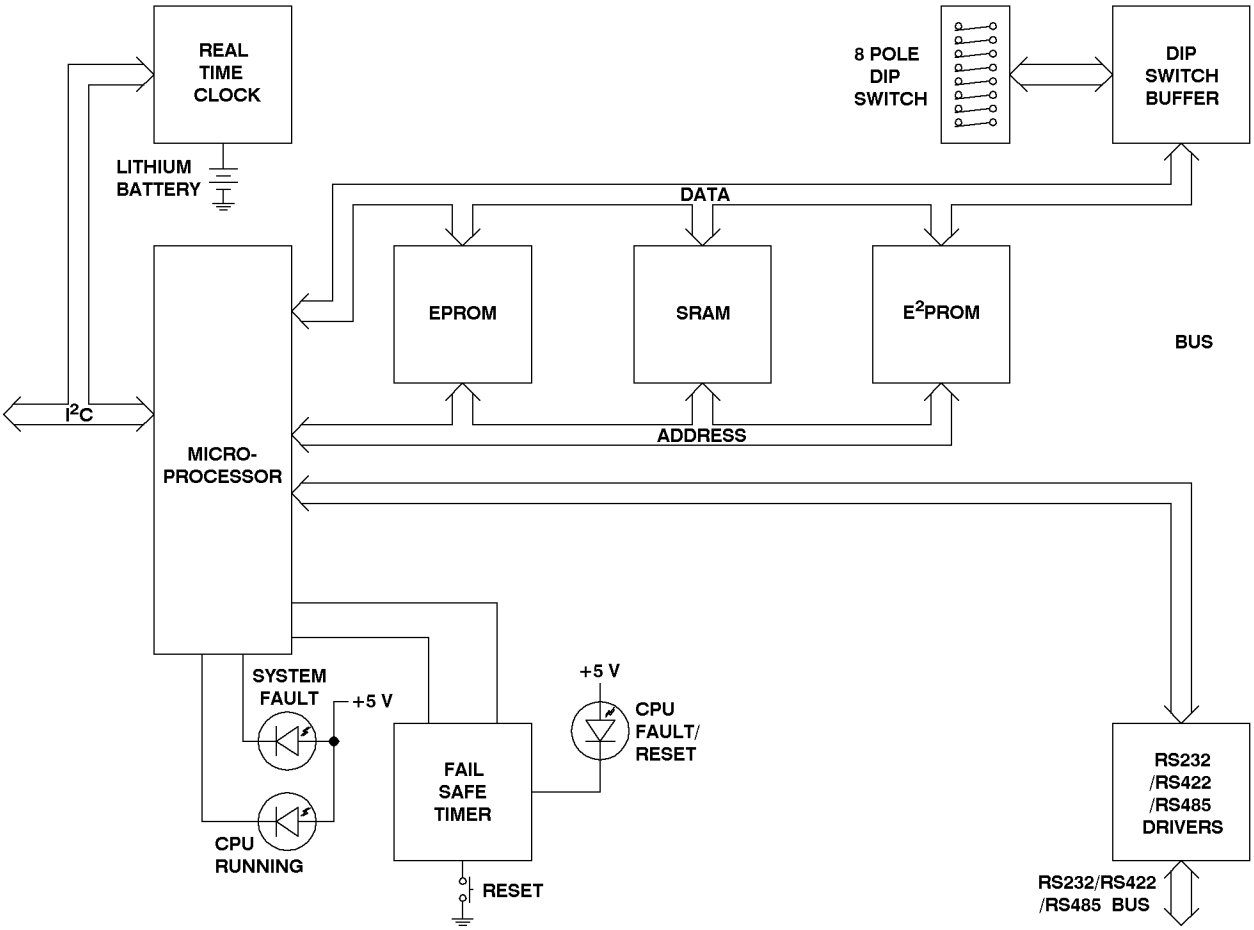

Figure 1 - 6052L Block Diagram

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serial bus the 6052L is transferring data to/from a PC, to/from the dual amplifier cards in its mainframe. The information which is transferred is; set gain of amplifiers, read gain of amplifiers, read DIP switch settings, read output voltage, read output current, read temperature, read signal presence, read voltage limiting, read overcurrent, read dual/mono mode, override DIP switches.

One output of the microprocessor is connected to the reset input of a timer (called the fail-safe timer). In the event that the microprocessor were to stop running, the timer times out and sends a pulse to the reset input of the microprocessor.

A manual reset of the microprocessor is also provided. A momentary push button switch is located on the front edge of the card for this purpose. A red LED, also located on the front edge of the card, remains lit while a reset is active.

For systems requiring multiple mainframes, an 8-pole DIP switch located on the CPU card sets the frame address. Each mainframe must have a unique address, but up to 255 mainframes can be connected by a single serial bus.

A red LED located on the front edge of the card serves as a fault indicator. The LED lights if a fault is detected in one of the cards in the system. The faults include an 'I^2C fault', 'Amplifier quit functioning', and 'Amplifier is in a continuous overcurrent condition'.

A green LED located on the front edge of the card indicates that the CPU is running. The LED is pulsed by the CPU and will flicker on and off as long as the CPU continues to run.

An accurate, calibrated real-time clock provides time information to the microprocessor. The power source for the clock circuit is backed up by a long life lithium battery.

SPECIFICATIONS

ELECTRICAL, ANALOG

1. Power Supply
   - Input supply Voltage Range . . . . . 95 - 130 VAC
   - Output Voltage Range . . . . . 4.75 - 5.25 V
     - I_{LOAD} = 250 mA, max.

INDICATORS

1. CPU Running . . . . . Green LED
2. CPU Fault/Reset . . . . . Red LED
3. System Fault . . . . . Red LED

CONNECTORS

1. 32-Pin Euro Connector . . . . . Panduit 100-032-033
   - For pin connections, see Table 1

MECHANICAL

1. Size,maximum overall
   - Height . . . . . (16.4 cm) 6.45“
   - Width . . . . . (2.41 cm) 0.95“
   - Depth . . . . . (32.0 cm) 12.6"
2. Weight . . . . . (353 gm) 0.779 lb

ENVIRONMENTAL

1. Operating Temperature Range . . . . . (32 °F - 122 °F) 0 °C - +50 °C
2. Storage Temperature Range . . . . . (–40 °F - 158 °F) –40 °C - +70 °C

PIN	FUNCTION		
	RS232	**RS422**	**RS485**
1	No Connection	Input $\overline{\text{RxD}}$ –	No Connection
2	Ground	Ground	Ground
3	No Connection	Input $\overline{\text{RxD}}$ +	No Connection
4	Ground	Ground	Ground
5	Ground	Ground	Ground
6	No Connection	Input $\overline{\text{TxD}}$ –	Data +
7	No Connection	Input $\overline{\text{DSR}}$ –	No Connection
8	No Connection	Input $\overline{\text{TxD}}$ +	Data –
9	No Connection	Input $\overline{\text{DSR}}$ +	No Connection
10	No Connection	Input $\overline{\text{DTR}}$ –	No Connection
11	No Connection	Output $\overline{\text{DSR}}$ +	No Connection
12	No Connection	Input $\overline{\text{DTR}}$ +	No Connection
13	$\overline{\text{RxD}}$	Output $\overline{\text{DSR}}$ –	No Connection
14	DSR	Output $\overline{\text{DTR}}$ +	No Connection
15	$\overline{\text{TxD}}$	Ground	Ground
16	RTS	Output $\overline{\text{DTR}}$ –	No Connection
17	DTR	Output $\overline{\text{RxD}}$ +	No Connection
18	CTS	Output $\overline{\text{TxD}}$ +	Data –
19	Ground	Output $\overline{\text{RxD}}$ –	No Connection
20	No Connection	Output $\overline{\text{TxD}}$ –	Data +
21	No Connection	No Connection	No Connection
22	No Connection	No Connection	No Connection
23	AC Line High	AC Line High	AC Line High
24	AC Line High	AC Line High	AC Line High
25	AC Line Neutral	AC Line Neutral	AC Line Neutral
26	AC Line Neutral	AC Line Neutral	AC Line Neutral
27	No Connection	No Connection	No Connection
28	No Connection	No Connection	No Connection
29	Ground	Ground	Ground
30	Ground	Ground	Ground
31	I^2C Serial Data	I^2C Serial Data	I^2C Serial Data
32	I^2C Serial Clock	I^2C Serial Clock	I^2C Serial Clock

Table 1 - Pin Connections