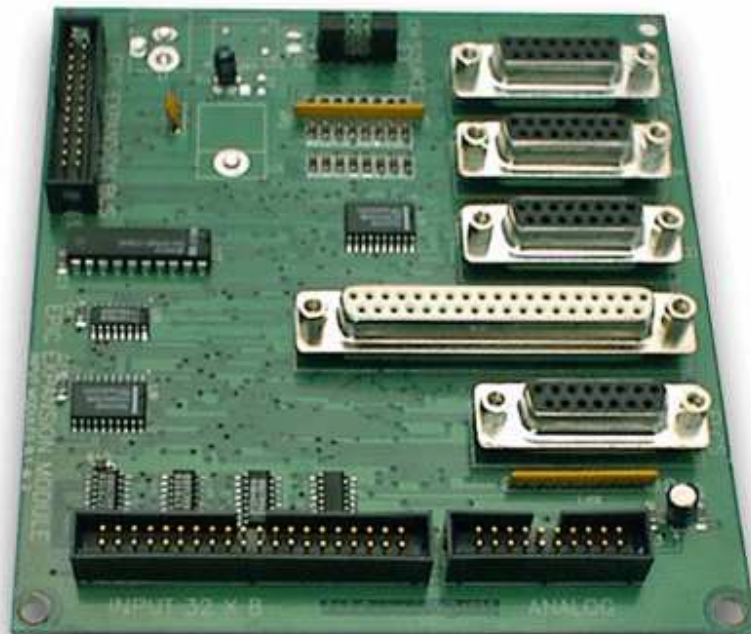


EPIC EXPANSION MODULE



The EPIC Expansion Module

The Expansion Module is used to handle all analog and button functions. All of your analogs and buttons will connect to the Expansion module, which then connects to the EPIC card. Since the Expansion module is simply a “middle man” between your analogs/buttons and your EPIC card, there is no programming involved. The only thing you will need to configure are the jumper settings, which are described below.

Jumper Configuration:

There is one set of jumpers on the First Expansion Module:

Analog source select (near DB-15 “RUDDER”)	Selects analog source channel for DB-15 Connectors A and B
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Each DB-15 connector supports four (4) analog channels, referenced as A, B, C, and D. The A and B channels of each connector are fixed; the C and D channels are selected by jumpers.

The following table lists the analog source channel assignments (i.e. the physical connections, before analogs are mapped from within the JOYSTICK program) for DB-15 connectors A and B:

	analog A	analog B	analog C	analog D
Connector A	0 (fixed)	1 (fixed)	2 or 4 (selectable)	3 or 5 (selectable)
Connector B	6 (fixed)	7 (fixed)	2 or 4 (selectable)	3 or 5 (selectable)

Channels 2/4 and 3/5 are mutually exclusive. For example: channel 2 can be attached to channel C of either DB-15 connector, but it can only be attached to **one** connector – i.e. channel 2 can be attached to connector A **or** connector B, but not both. And if channel 2 is attached to connector A, then channel 4 must be attached to connector B (or not jumpered at all).

There are no jumper combinations that will attach analog 2 or 4 to analog D, or analog 3 or 5 to analog C. If you do need such a configuration, remap the analog channels from within the JOYSTICK program.

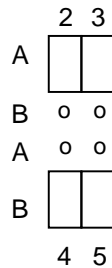
The jumpers are arranged in such a way that the C channel is controlled by the left column of jumpers and the D channel is controlled by the right column.

There are three (3) pins for each jumper: one for selecting connector A, the second is a shared pin in the center, and the third for selecting channel B.

When properly configured, the jumpers in a single column will be jumpering either (a) the outermost two pins or (b) the innermost two pins. Both jumpers **must** be moved or a channel conflict will result.

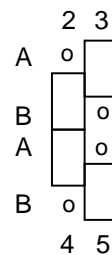
The following table shows the default jumper settings for channels 2 and 3 on connector A and channels 4 and 5 on connector B (this configuration makes connector A work like a “dual port” joystick connector):

CH SOURCE



The following table shows jumper settings for channels 3 and 4 on connector A and channels 2 and 5 on connector B, as might be used with a 3 channel joystick (X/Y and hat switch or throttle) attached to connector A and rudder pedals attached to connector B.

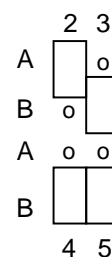
CH SOURCE



Note: In the example above, both jumpers in the left column were moved to avoid a channel conflict.

The following table shows invalid jumper settings (both channels 3 and 5 are on connector B):

CH SOURCE



In order to resolve the above channel conflict, you must do one of the following:

- move the upper jumper in the right column from B to A (moving channel 3 from the B connector to the A connector);
- move the lower jumper in the right column from B to A (moving channel 5 from the B connector to the A connector);
- remove one of the jumpers in the right column (either one) to disable that channel on both connectors.

Note: If you are using standard (i.e. ungrounded, unmodified) analogs, they must be connected to channels 0 through 3 – you cannot attach them to analogs 4 through 15. All devices attached to analog channels 4 through 15 **must** be modified (i.e. use grounded pots).