# Notes on riser card pinout and graphics

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The onboard graphics of a FIC 486-GAC-2 is disabled and cannot be enabled without the original and proprietary ISA riser card being inserted.
1. Easy solution: Don´t bother, just put an ISA graphics card in the ISA slot, or, if you intend to use other ISA cards like a NIC, insert some standard 98-pin ISA riser card and populate it with a video card, NIC, whatever.
2. Workaround if you want to use the onboard graphics and leave the ISA slot empty (or if you need all slots of the riser card otherwise) you have to "mod" the mainboard to force it to enable onboard graphics:
FIC decided to use the 6 pins of the ISA slot that are situated in the notch between the 8-bit slot and the 16-bit extension slot.
the 3 pins between "A31" and "C1" are connected to ground.
the 2 pins following "B31" are connected to 5V (Vcc) as additional power supply for the riser.
The pin between these 2 pins and pin "D1" of the 16-bit extension is the switch for enabling internal graphics. (FIC probably wanted to make sure that it´s impossible to enable 2 ISA graphics at the same time.)
As soon as the proprietary riser is inserted, this pin is pulled to ground. Then and and only then it´s possible to enable the onboard graphics using the first switch of "SW1".
If a graphics card is inserted in the riser, the pin is released and is pulled up to Vcc by the mainboard logic, the onbord graphics is then forced to being disabled no matter what the position of "SW1" is.
So to manually force the onboard graphics to being enabled, just put a 1KOhms resistor from this ISA pin to ground. Make sure, no second graphics card is inserted without first manually disabling the onboard graphics chip with "SW1".

For no logical reason the second switch of "SW1" needs to be set to "monochrome", otherwise there ´s an error beep at start up ("long -short-short-short", bad video memory or video adaptor)
This switch is connected to a pin of the Intel "N8224PC" microcontroller, that I´m not even able to find a datasheet about.
(Maybe the description in the silkscreening is wrong.)