



Field Troubleshooting Guide for M400/M400A, M410, and M412 Units

No Front-Panel Display – Any Condition

Check that display module cable connector is well seated. If so, return unit to Studio Technologies for evaluation.

Note: Field-replacement display modules are no longer available for M400, M410 & M412 units; faulty displays must be serviced at the factory. Field-replacement display modules may be purchased for M400A units.

No Front-Panel Display of Channel Parameters for a Single Card

Check card for power LED.

If card power LED is on, check that card IDs are set properly.

If card power LED is off, return unit to Studio Technologies for evaluation.

No Power – No AC Mains Input Power, but 12V DC Input Power Works

Check for 120V at the input pins of the AC mains power supply module.

If 120V is present but LED on power supply is not illuminated, AC mains supply is faulty and should be replaced.

No Power – Any Power Source

Check that front-panel button and switch board cable connectors are fully seated at both ends.

Units subject to high cyclic-rate vibration (such as those mounted in vehicles or subject to frequent shipping) may experience loosening of these connectors. Apply acid-free electronics grade silicone or PCB rigidizing hot-melt glue to the connectors to hold them in place.

If connectors are well seated but the unit does not power on from AC mains or 12V DC, return unit to Studio Technologies for evaluation.

No Response from Front-Panel Buttons

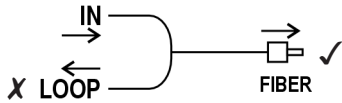
Check that front-panel button and switch board cable connectors are fully seated at both ends.

Units subject to high cyclic-rate vibration (such as those mounted in vehicles or subject to frequent shipping) may experience loosening of these connectors. Apply acid-free electronics grade silicone or PCB rigidizing hot-melt glue to the connectors to hold them in place.

If connectors are well seated but the unit does not power on, return unit to Studio Technologies for evaluation.

Field Troubleshooting Guide for M400/M400A, M410, and M412 Units, continued

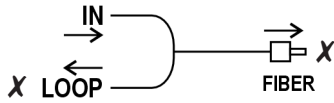
Individual Card Troubleshooting: E2O Cards (Tx Channels)



No SDI Loop Output on One Channel, Optical Output OK

Electrical fault.

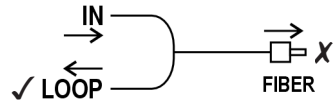
Return unit to Studio Technologies for evaluation.



No SDI Loop Output or Optical Output on One Channel

Electrical fault.

Return unit to Studio Technologies for evaluation.



No Optical Output but SDI Loop Output is OK, One Channel

Clean the COM fiber for this card's mux module. Inspect with fiber optic microscope if available.

If fault is not cleared, clean the relevant wavelength fiber for this output at the SFP end.

If fault is not cleared, swap fiber connections with adjacent mux module.

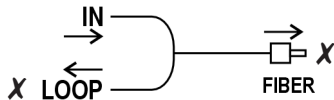
If fault follows the mux module, replace it.

If fault remains with card, remove and clean the SFP module for the relevant wavelength.

If fault is not cleared, swap SFP module with adjacent card.

If fault follows SFP module, replace it (very rare).

If fault is not cleared, return unit to Studio Technologies for evaluation.



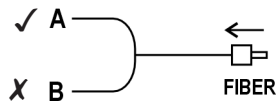
No Optical Output on All Channels, No Loop Output on All Channels

Check card for power LED.

If card power LED is off, return unit to Studio Technologies for evaluation.

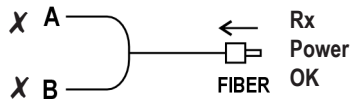
Field Troubleshooting Guide for M400/M400A, M410, and M412 Units, continued

Individual Card Troubleshooting: O2E Cards (Rx Channels)



No SDI output on either A or B for one channel

Electrical fault, return unit to Studio Technologies for evaluation.



No SDI output on A and B for one channel

If the front panel display shows that the input is locked but no SDI is found on either output, the problem is likely electrical. Return unit to Studio Technologies for evaluation.

If front panel display does not show the input is locked, or shows low receive power, clean the COM fiber for this card's demux module. Inspect with fiber optic microscope if available.

If fault is not cleared, clean the relevant wavelength fiber for this channel at the SFP end.

If fault is not cleared, swap fiber connections with adjacent demux module.

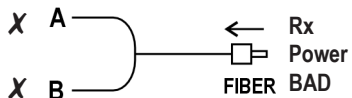
If the fault follows the demux module, replace it.

If the fault does not follow the demux module, remove and clean the SFP module for the relevant wavelength.

If fault is not cleared, swap SFP module with adjacent card.

If fault follows the SFP module, replace it (very rare).

If fault is not cleared, return unit to Studio Technologies for evaluation.



No SDI Output on All Channels

Verify that card is powered and operating by checking its status via the front panel or observe power LED on the card itself.

If card shows "unlocked" for all three fiber inputs, clean the COM fiber for this card's demux module. Inspect with fiber optic microscope, if available.

If fault is not cleared, swap fiber connections with adjacent demux module.

If fault follows the demux module, replace it.

If fault is not cleared, return unit to Studio Technologies for evaluation.