

TROUBLESHOOTING GUIDE

RSX RECORDERS BUILT PRE-1998

Following is a list of recommendations based upon indications:

NOTE: All ESD precautions should be observed when working inside of the RSX Recorder.

1. BEZEL OPEN INDICATION (WHILE BEZEL IS SHUT) -

Meaning - Recorder believes the bezel is still open. No disk operations of any kind can occur.

Cause - Shifting of Mother Card in the case, microswitch bent to side, failed microswitch.

Remedy - Test the switch by depressing it Manually to see if the Bezel open indication goes away. If it goes away make sure that the front Mother card is parallel with the PC Molding - most likely it has shifted during shipment. Make sure that the microswitch is visible and directly centered behind the hole in the PC Molding for it's operation. If it still gives the indication pull the recorder slightly like you were trying to remove it from it's case until the PC Molding is now flush with the front portion of the case.

If the problem still persists call TAC for warranty/parts/repair/replacement.

2. BLANK DISPLAY (WHITE DISPLAY) -

Meaning -This is called display fadeout.

Cause - CPU card locking up.

Remedy - Open up the recorder from the front and locate the Memory card (1" by 3" card mounted perpendicular onto the CPU card). Press the memory card down and in toward the CPU socket. Make sure that all other cards (CPU, Analog Input Card, Optional Discrete Cards, and Power Supply card are properly seated against the front Mother Card. Make sure that all cables are properly seated. Reinstall the recorder into it's case.

If the problem persists. Perform a memory clear services by pressing the Menu, Display, and Point/Detail buttons simultaneously. The Recorder will need to be re-calibrated after this routine.

If the problem still persists call TAC for warranty/parts/repair/replacement.

3. CPU ERROR MESSAGES (EXAMPLE ERROR'S 2,3,4,10)

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Meaning - CPU card is locking up.

Cause - Unknown.

Remedy - Verify all cards and cables are seated properly. Press down and in on the memory card as in #2 above. If able, perform a *memory clear services of the Configuration only* under maintenance mode. If unable to get into maintenance mode because it is locked up on one screen press the Menu, Display, and Point/Detail buttons simultaneously. The recorder will need to be re-calibrated after performing this routine.

If the problem still persists call TAC for warranty/parts/repair/replacement.

4. DISK WILL NOT INITIALIZE OR FORMAT

Meaning - No disk operations.

Cause - Bezel open.

Bad Floppy Disk.

Memory Problems - Insufficient or Severely Corrupted.

Bad CPU.

Bad Floppy Drive.

Remedy - Verify Bezel is shut and no *Bezel Open Indication* is displayed. Attempt to use other formatted disks.

NOTE: Make sure they are recommended disks - 3M, Maxell, or Sony (we have had a lot of problems with it reading other companies disks).

If it will format but will not initialize attempt to use *Initialize by new schedule* as opposed to *initialize by current schedule* - even though the schedule has not been changed.

NOTE: Initialize by new schedule should be used anytime any item in the data storage schedule has been changed, or if initialize by current schedule does not work..

If the problem still persists, perform a *memory clear services of the Configuration only* under maintenance mode.

If the problem still persists call TAC for warranty repair/replacement.

5. DISK WILL REPLAY IN ONE RSX BUT WILL NOT REPLAY ELSEWHERE.

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Meaning - Disk data can not be read from the device where replay is being attempted..

Cause - Bad floppy drive in RSX where it was originally stored from.
Bad floppy drive in RSX where replay is currently being attempted.
Corrupted SDA (if SDA is the only location where replay will not occur).

Remedy - Isolate whether this is an SDA problem or not. If SDA is being used - see if SDA can read any other disks from the same RSX as the one that provided the disk that could not be read. If it can read other disks from the same RSX then it's most likely a bad disk or bad copy of the data. See if SDA can read disks from any other RSX. If it can, it has a bad floppy drive in the unit that provided this disk. It is important to try more than one floppy disk from an RSX that is exhibiting this problem before condemning the floppy drive. If SDA will not read any files from any RSX's - reload SDA.

If SDA is not used - try to replay RSX data on multiple recorders until one can be isolated as the only recorder that will not replay data, unless it comes from that individual recorder. This RSX should have it's floppy drive replaced.

6. DISPLAY MISSING (BLANK)/DEAD -

Meaning - No Power to the display or bad display.

Cause - Possible bad Display or bad Power Supply.

Remedy - Make sure that the power supply is mounted properly. Verify all connections. Look to see if there is a blinking light on the Analog Card (can be seen through the ventilation holes at the top). If the light is blinking bad Display, Display Cable, Display Connection, or CPU. If the light is not blinking most likely a bad Power Supply.

If the problem still persists call TAC for warranty/parts/repair/replacement.

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7. Flashing “D” -

Meaning - A Diagnostic has occurred.

Cause - Go to the On Line Menu, Access Summaries, Display Diagnostics to find out the cause.

Remedy - Based upon cause.

8. INACCURATE ANALOG INPUT READINGS -

Meaning - Readings are not what was expected for them to be.

Cause - Improper Programming.

Input does not match programmed input. (Example: transmitter is out of calibration and is actually putting out 3.8 mA to 20.1 mA).

Recorder out of calibration.

Corrupted configuration/calibration data.

Bad RJ Sensor and Cable.

Bad Analog Input Base Board or Module.

Remedy - Verify all programming is correct. Read incoming voltage and verify it is with the programmed limits.

Check to see if all inputs are off by ambient temperature. If inputs are TC's and are off by ambient temperature but voltage inputs are accurate - bad RJ Sensor and cable. This can be verified by going to the On Line Menu, selecting Access Summaries, Display All Analogs, and pressing the down arrow key until SY1 is displayed. SY1 is the value of the reference junction. Call TAC for warranty/parts/repair/replacement.

See if all inputs are reading inaccurately. If they are - perform memory clear services of the calibration only and then re-calibrate. If the problem persists under memory clear services, clear all memory. Re-program and re-calibrate. If the problem still persists call TAC for warranty/parts/repair/replacement.

If only one input is reading incorrectly try to move the external input to another point. If the problem moves to the new location - external input problem. If the problem stays with the same input location call TAC for warranty/parts/repair/replacement.

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9. INPUT FAILURE DIAGNOSTIC -

Meaning - An input was measured more than 10 % above or below the programmed range.

Cause - Open Input.

Input is exceeding programmed range by more than 10 % (Usually occurs when a transmitter input is programmed as an indirect input of 1-5 volts - 4-20mA * 250 Ohm resistor - and the transmitter is turned off). 0 volts would be beyond 10% below the programmed lower limit of 1 volt.

Previous Diagnostic that has never been deleted. Diagnostics must be deleted manually.

Bad Analog Input Card.

Remedy - Verify there are no open inputs. Delete the Open Input Diagnostic from the On Line Menu, Access Summaries, Delete Diagnostics. Remove power and reinstall power to see if it returns.

If it returns verify programming. Make sure the actual inputs are within the programmed range.

If the problem still persists call TAC for warranty/parts/repair/replacement.

10. STORAGE FULL -

Meaning - Storage is no longer going to disk. It has instead been going to the buffer and the buffer has become full. Data is about to be lost.

Cause - Bezel Open.

Unformatted Disk.

Disk Not Initialized.

Bad Floppy Disk.

Corrupted Memory.

Memory Failure.

Normal Indication - if Rollover is not selected for all data currently going to the disk (ex. Trends, Alarms, Events, Diagnostics, Unit Data) and any one of these areas has become full.

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Remedy - Verify there is no Bezel Open Diagnostic.

Verify that this is not a normal indication by checking the Data Storage Status Screen. From the On Line Menu select Data Storage Status. For each data item there will be a status such as Roll for rollover, Off for the data is not going to disk, or a number of remaining samples until that area gets full.

Try alternate floppy disks that have been formatted in this recorder.

NOTE: Make sure they are recommended disks - 3M, Maxell, or Sony (we have had a lot of problems with it reading other companies disks).

Verify that the Disks have been *initialized by current schedule*. If it still fails attempt to *initialize by new schedule*.

NOTE: Initialize by new schedule should be used anytime any item in the data storage schedule has been changed, or if initialize by current schedule does not work.

Verify there is enough memory by going to Off-Line Diagnostics under the Maintenance menu and verify that the Ram Size is at least 750 KB. If below 750 KB call TAC - bad CPU/Memory card.

If 750 KB or above perform a Memory clear services of the Configuration Only - just in case memory is corrupted.

If the problem still persists call TAC for warranty/parts/repair/replacement.

11. TREND MISSING (DISPLAY IS GOOD BUT NO TREND LINES) -

Meaning - Out of memory for playback.

Cause - Corrupted Memory or bad memory/bad CPU.

Remedy - Open up the recorder from the front and locate the Memory card (1" by 3" card mounted perpendicular onto the CPU card). Press the memory card down and in toward the CPU socket. Verify there is enough memory by going to Off-Line Diagnostics under the Maintenance menu and verify that the Ram Size is at least 750 KB. If below 750 KB call TAC - bad CPU/Memory card.

If 750 KB or above perform a Memory clear services of the Configuration Only - just in case memory is corrupted.

If the problem still persists call TAC for warranty/parts/repair/replacement.