

FireCR + trouble-shooting manual

❖ FireCR Plus Issue list-up

Classification	Model	Problem	Resolution
Hardware	FireCR +	No power	<ul style="list-style-type: none"> • Power board • Power switch • Power adaptor
	FireCR +	Knocking sound	<ul style="list-style-type: none"> • Home sensor • Stage misalign • Loosen belt tension
	FireCR +	Booting issue	<ul style="list-style-type: none"> • Core board • Power board • USB cable
	FireCR +	RPM, PSD value "0"	<ul style="list-style-type: none"> • Optic plate • BLDC board • PSD
	FireCR +	RPM value is out of limit	<ul style="list-style-type: none"> • Optic plate • BLDC board
	FireCR +	Do not recognize the cassette housing	<ul style="list-style-type: none"> • RFID board • Cassette housing
	FireCR +	Calibration scanblank value is abnormal	<ul style="list-style-type: none"> • Main board
Image	FireCR +	Blank in the middle of image	<ul style="list-style-type: none"> • Auto align • Fiber bundle
	FireCR +	Wavy lines	<ul style="list-style-type: none"> • Main board
	FireCR +	Horizontal lines on the whole image	<ul style="list-style-type: none"> • Optic plate • Step motor
	FireCR +	Vertical lines on whole image	<ul style="list-style-type: none"> • PMT • Fiber bundle
	FireCR +	Several vertical lines on the image	<ul style="list-style-type: none"> • IP • The particle on the fiber bundle
	FireCR +	Partially horizontal lines	<ul style="list-style-type: none"> • Main board • Vibration

❖ FireCR Plus General Issue

Optic plate

+

BLDC board

1. The horizontal lines on the whole image.
2. RPM value is not stable'
3. PRM value is "0".
4. PSD value is too low.
5. BLDC motor is not rotating.

Fiber bundle

+

PMT

1. The vertical lines on the whole image
2. Several vertical line on the image
3. Blank image in the middle of the image

Step motor

1. The regular horizontal lines on the whole image

Vibration

1. The random horizontal lines on the image

Main board

- 1. Stop during the scan.
- 2. Calibration Scanblank value is abnormal
- 3. Wavy noise

No Power

- 1. Power adaptor
- 2. Power switch
- 3. Power board

Booting issue

- 1. Core board
- 2. USB cable
- 3. Power board

Knocking sound

- 1. Home sensor
 - 2. Stage balance
 - 3. Loosen Belt tension
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❖ Troubleshooting Procedures

1. Main board replacement

- Refer to the FireCR+ Service Manual p.17

2. Fiber bundle replacement

- Refer to the FireCR+ Service Manual p.27

3. Core board Replacement

- Refer to the FireCR+ Service Manual p.27

4. Y-axis motor replacement

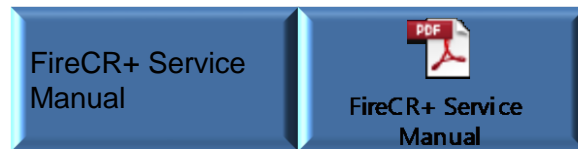
-Refer to the FireCR+ Service Manual p.25

5. BLDC board replacement

- Refer to the FireCR+ Service Manual p.19

6. RFID board replacement

- Refer to the FireCR+ Service Manual p.32



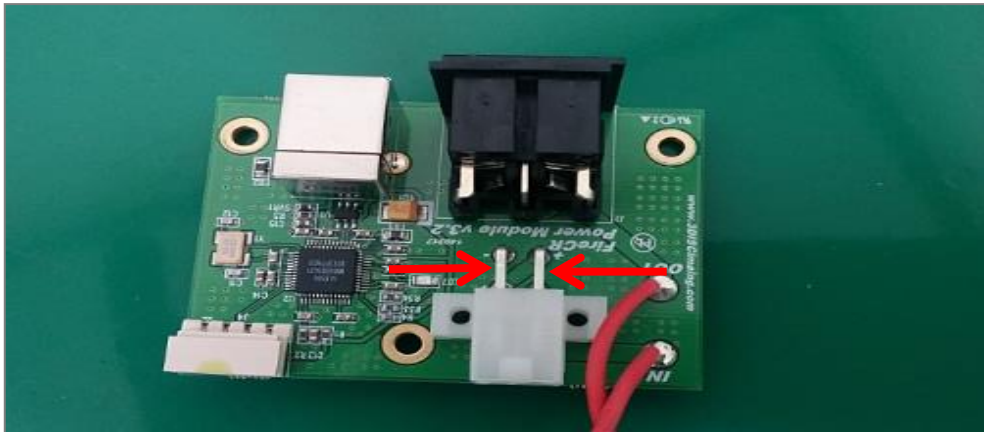
FireCR+ Service
Manual

FireCR+ Service
Manual

7. No power trouble-shooting



- 7.1 Check to see if power supply is in working order by swapping with a working one.
- 7.2 Remove top cover and internal cover.



- 7.3 Check the voltage.
- 7.4 Make sure that voltage reads 24V (Scanner must be turned on).
- 7.5 If not, replace the power board or power switch.
 - Refer to the FireCR+ Service Manual p.33 for power board replacement

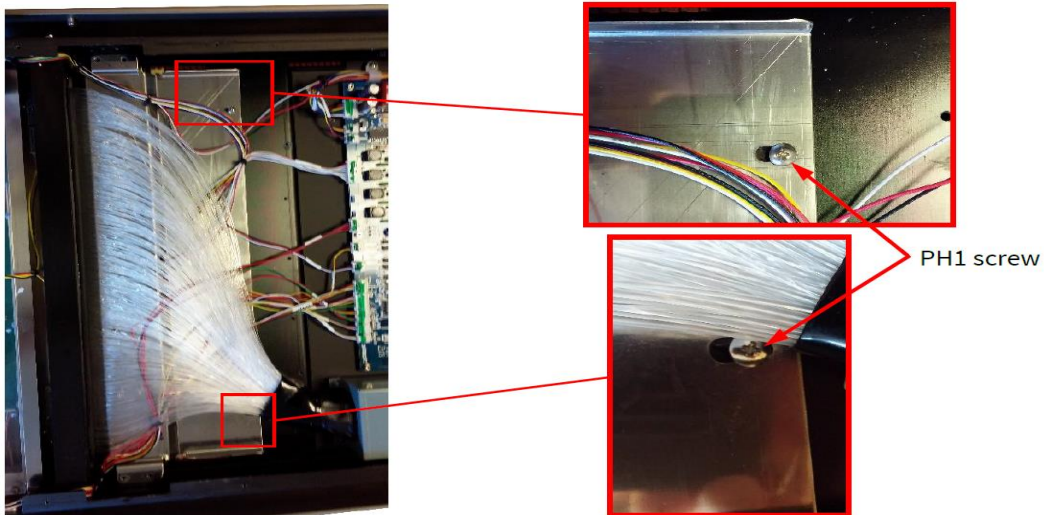
8. Fiber bundle cleaning

8.1 Turn off the power and take out the power cable and USB cable.

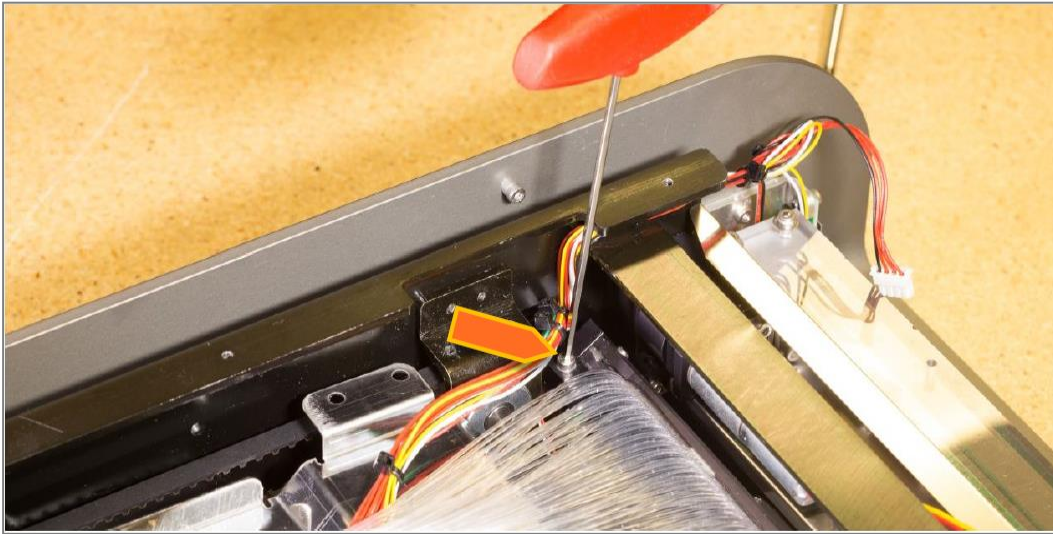
8.2 Remove the top cover and internal cover.



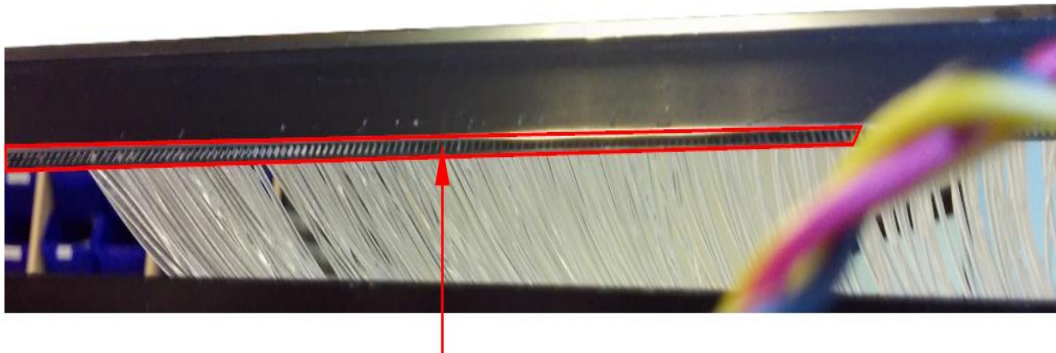
8.3 Remove 6 screws holding fiber bundle guide in position using 2.5mm hex key and remove the fiber guide.



8.4 Remove the two screws holding the eraser assembly and slide the eraser towards the back of the reader.



8.5 Remove the screw on each side of the fiber bundle in place using a 2.5mm hex key.



8.6 Lift up the fiber bundle and clean the end using either an antistatic screen wipe, or a microfiber cloth and technical alcohol.

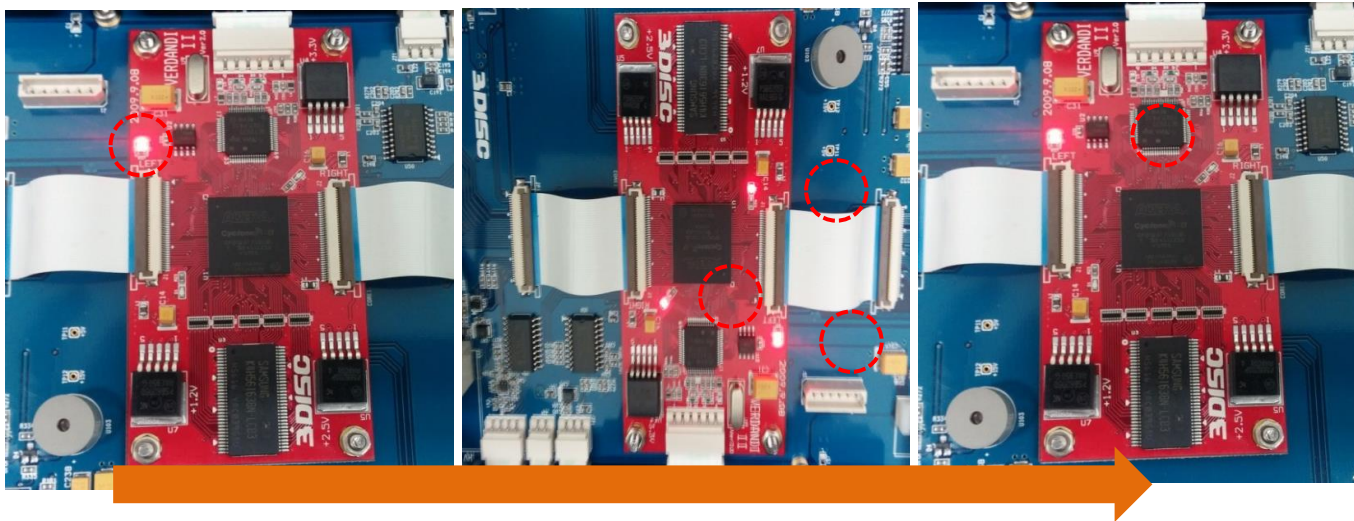
8.7 Ensure that the two guides for the fiber bundle is in position and reinstall in reverse order.

8. Booting issue trouble-shooting

8.1 Connect USB cable in the another port of the computer.

8.2 Check to see if another USB is in working order by swapping with a working one.

8.3 Remove the top cover and internal cover.



8.4 Check the core board led status

8.5 When you turn on the power, one led of the core board is on.

(One led is on → Three led is on → One led is on.)

8.6 If the led of the core board is something wrong, replace the core board.

8.7 Check the power board

9. Not recognize the cassette housing

9.1 Scan it with another cassette housing to check cassette working well.

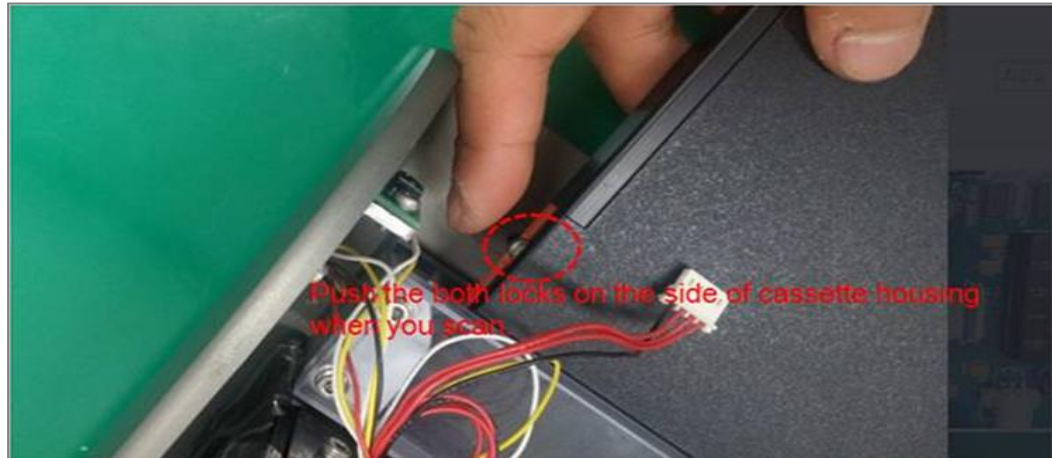
9.2 Check the RFID board.

- Refer to the FireCR+ Service Manual p.32 for RFID board replacement.

10. Knocking sound

10.1 With cassette

10.1.1 Scan it with another cassette housing to check cassette working well



10.1.2 Remove the top cover and internal cover.

10.1.3 Scan it with pushing both locks on the side of the cassette housing.



10.1.4 Check it if the cassette lock motors hold the cassette housing firmly.

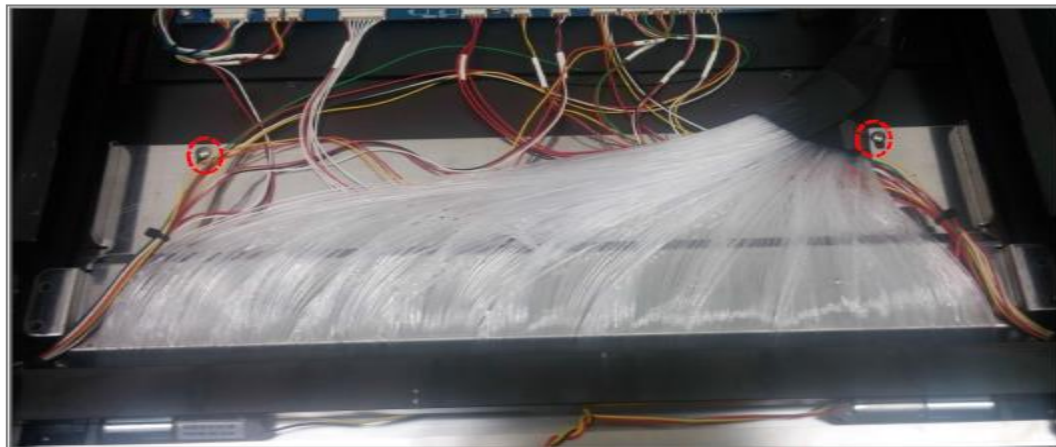
10.2 Without cassette

10.2.1 Check the home sensor

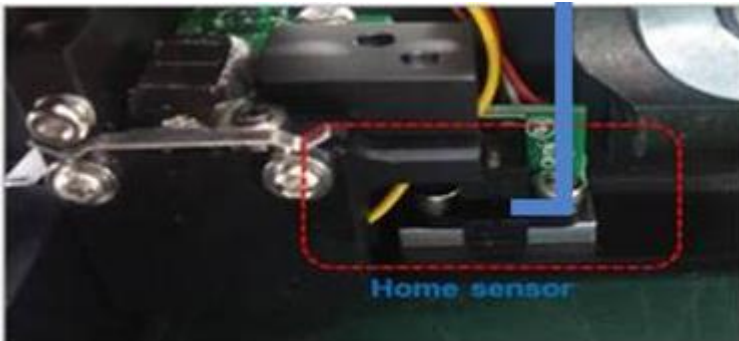
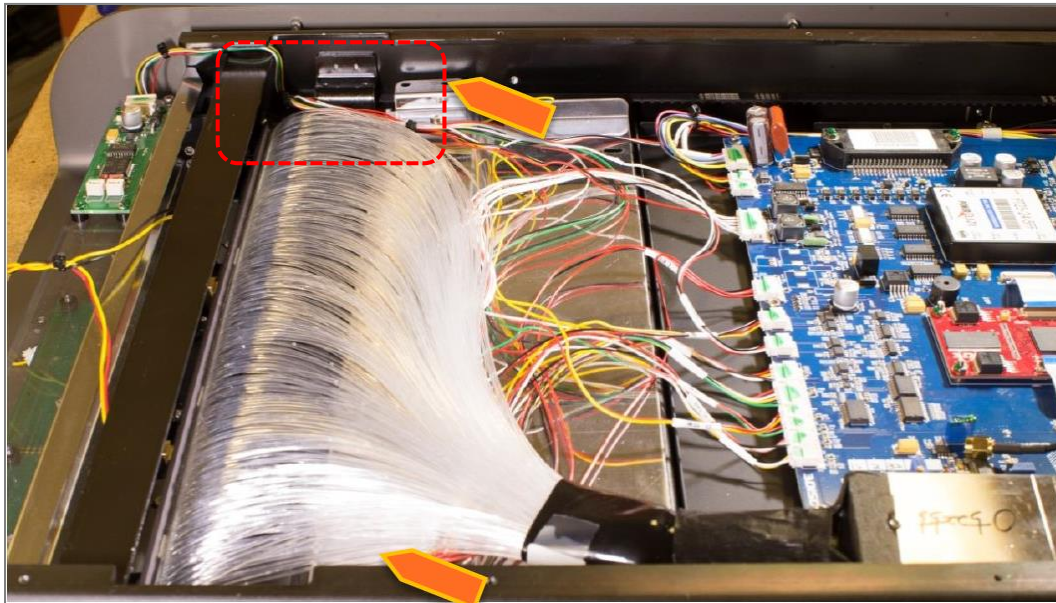
- 1) Turn off the power.
- 2) Remove the top cover and internal cover.
- 3) Move the stage backward manually.



- 4) Remove 6 bolts and remove the black fiber guide.



- 5) Remove 2 bolts
- 6) slide the eraser assembly
- 7) Turn on the power



- 8) Manually sense the home sensor with a small wrench.
- 9) If the stage is not stopped, need to replace the home sensor.

10.2.2 Check the belt tension and unaligned stage.
- Refer to the FireCR+ Service Manual p.39

❖ The case of artifact



- There are horizontal lines on the image.
In case of these horizontal lines, replace the **defective Y-axis motor**.
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- There are vertical lines on the image.
In case of these horizontal lines, clean the fiber bundle or replace the defective **fiber bundle**.



- In case of **unstable optic plate**.