

Install the IMROC-IR EOU

Steps:

1. Place the EOU in the Equipment Room

Bring the EOU unit (the PC box) to your MRI Equipment Room and place it in a location that will not be disturbed by other equipment or traffic in the room, for example, an equipment rack. There are no special space or clearance requirements for the EOU.

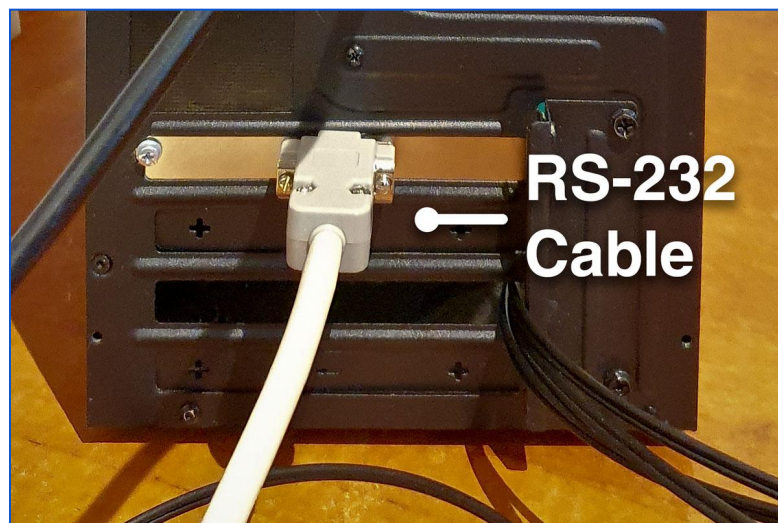
Physical cable connections will be made between the EOU and the Control Console (in the Control Room) and the IR Transceivers in the Scanner Room via the waveguide.

If needed, the EOU can also be installed in the MRI Control Room.

NOTE: During the IMROC-IR installation process, you will need full access to the EOU in order to make the connections required.

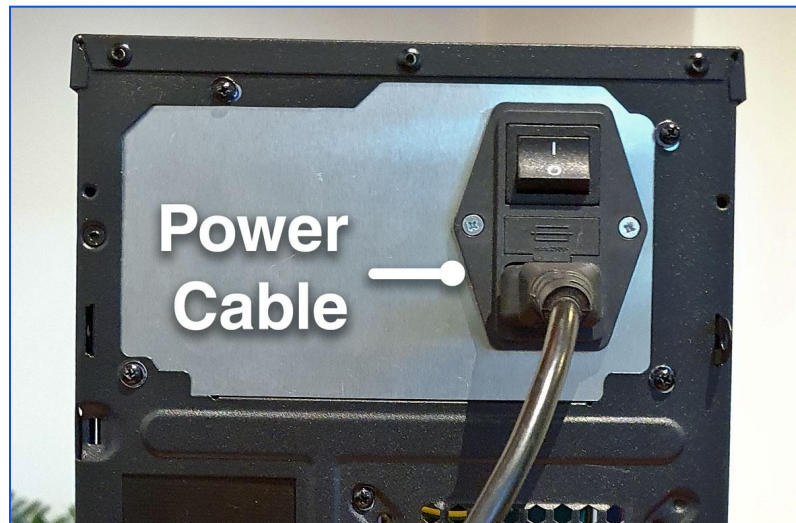
2. Connect the Control Console cable to the EOU

On the back of the EOU case, attach the free end of RS-232 serial cable from the Control Console. (The other side of the cable was attached to the Console in the [previous step](#).)



3. Connect the power cable to the EOU

Attach the standard AC power connector to the female power plug on the back of the EOU.



Then connect the power plug at the other end of the cable to a standard electric power supply receptacle. **Do not power on the EOU yet.**

4. Connect the fiber cables to the EOU

The IMROC-IR uses fiber optical cables to support MRI-safe communications between users in the MRI Suite and Control Room.

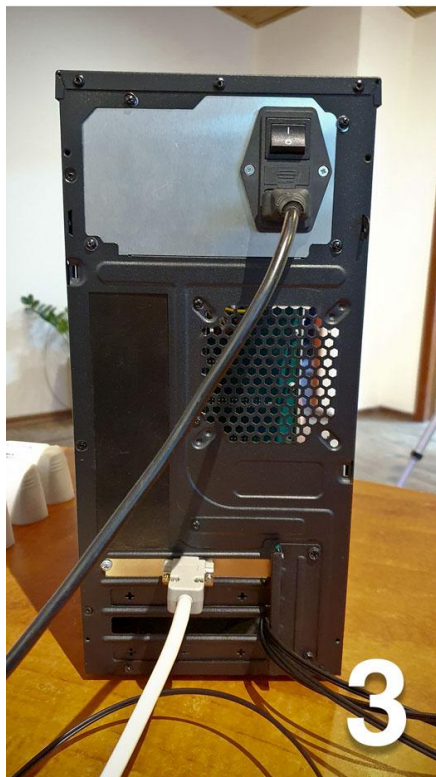
The number of cables you will have depends on how many Wireless IR Transceiver Units are in this specific IMROC installation. One end of each fiber cable pair is connected to the electronics cards in the EOU. The second end of each cable will be passed through the waveguide to the MRI Suite, where it will be connected to an IR Transceiver Unit.

CAUTION: Exercise extreme care whenever handling the IMROC-IR connection cables. Do not bend or twist the optical cables to within a radius of less than 1 inch (2.5 cm). Bending or twisting of the optical cables can cause excessive optical signal loss and/or fiber breakage.

4.1. Thread one end of the fiber cable pairs into the EOU

As shown below: **(1)** remove the screws of the left panel cover and slide it off the EOU; **(2)** insert the cable ends into the EOU case via the open slot located at the bottom of the back panel; **(3)** most of the 30 m length of the fiber cables will remain outside of the EOU case.

As much as possible, **avoid contact** with other electronic parts of the EOU.



4.2. Remove the front panel of the EOU case

With the EOU case located near its final position, gently remove its front panel as shown.



Apply slight finger pressure at the bottom of the panel to release it from the EOU.

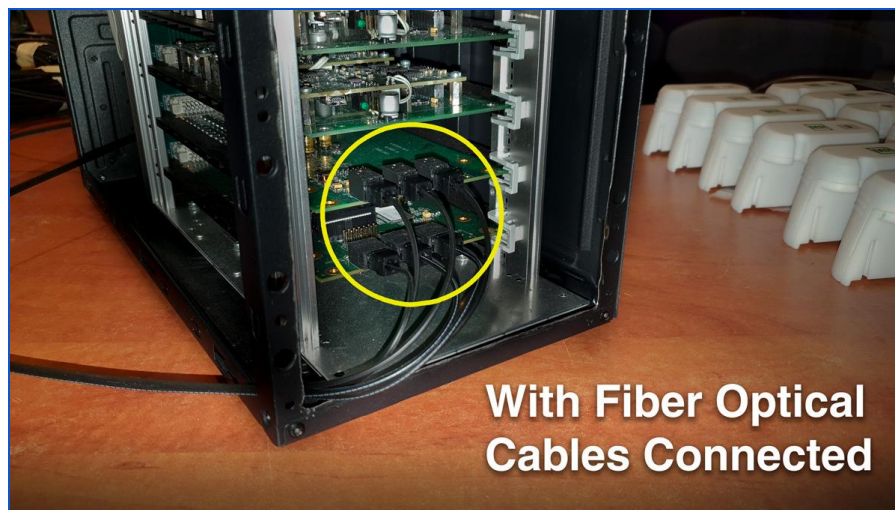
4.3. Connect fiber cable pairs to EOU electronics cards

Carefully thread the fiber cable pairs to the front of the EOU and connect them to their corresponding connectors on the electronics card, as shown in this video:



As shown, carefully connect one connector from each optical pair to the upper card, and its paired connector to the lower card, in sequence. Be sure to turn each optical connector to the correct orientation before attempting to attach it to its connecting port. You can only insert the connector to its port in the correct orientation.

Completed connections will look like the example image below:



5. Switch on the EOU

When all fiber optical connections are complete, toggle the electrical power switch at the back of the EOU to the **ON** position.

6. Switch on the Control Console

Return to the Control Console located in the MRI Control Room. Toggle the power switch at the lower right of the Console back panel to the **ON** position.

NOTE: The Control Console power switch controls the entire IMROC-IR System. Therefore, *both* Console and EOU switches must be toggled **ON** for the System to operate.

7. Confirm light emission from each fiber optical connection

WARNING: During this procedure, the EOU case is still open. Do not touch any of the electronics inside the case at this time.

With the System powered on, carefully inspect the unconnected end of each fiber optical cable connector to confirm that it is emitting light. **Do not look directly at the optical connector.** Instead, point each connector to a sheet of white paper to observe its emission.

If an optical connector is not emitting light, check that its opposite end is snugly connected to the electronics card port at the front of the EOU.

8. Close the EOU case

When all connections are confirmed as working, toggle the electrical power switch at the back of the EOU to the **OFF** position and close the case:

1. Arrange the fiber optical cables neatly inside the case. Do **not** use cable ties to bundle them or secure them to the case.
2. Carefully insert or slide the panel back into its closed position on the EOU. Use a screwdriver to securely tighten its screws.
3. Carefully replace the front panel of the EOU.

9. Place the EOU case in its final position for operation

The fiber optical cables that remain outside of the EOU case will be connected to the IR Transceiver Units in a later step.

IMPORTANT: The EOU power switch should always be in the **ON** position when the System is operating. The EOU power switch should be toggled OFF only when transporting the System.

You have completed the basic IMROC-IR EOU installation.