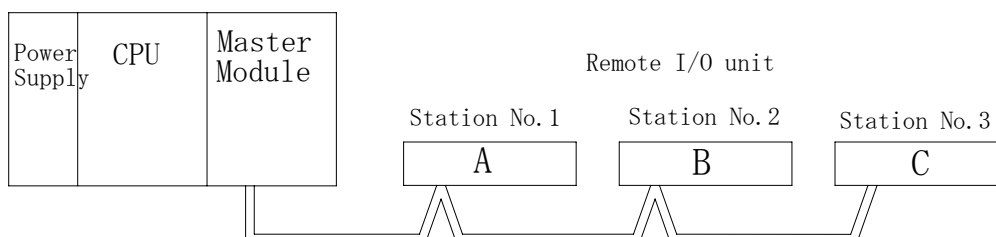


Troubleshooting

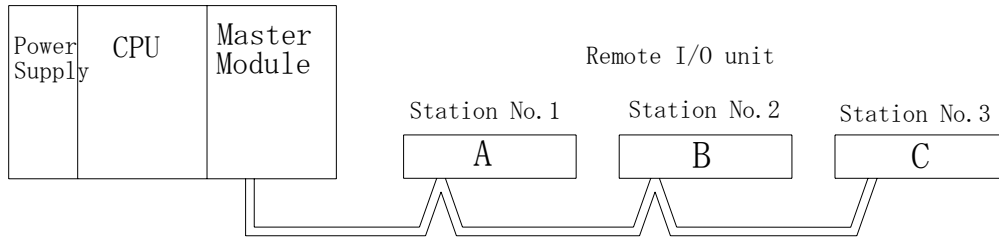
Confirming Errors on the LED Display

The causes of errors and necessary corrective actions that can be determined from the LED status on the remote I/O module are shown in the following table, when the system configuration is assumed as shown in the figure below and the master module's SW, M/S, PRM LED's are turned off (that is, the mater module is set normally).



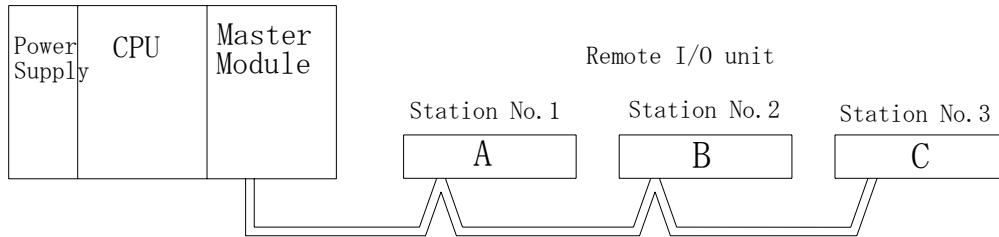
		LED status						Cause	Corrective action
Master module	Remote I/O module								
	A		B		C				
		PW ●	PW ●	PW ●	L RUN ●	L RUN ●	L RUN ●	Normal	-
		L ERR ○	L ERR ○	L ERR ○	L ERR ○	L ERR ○	L ERR ○		
		PW ○	PW ●	PW ●	L RUN ○	L RUN ●	L RUN ●	All LED's on remote I/O module A are turned off, indicating that the 24V power is not supplied or the voltage is insufficient.	Check the voltage of the 24V power, then supply correct power to the remote I/O module.
		L ERR ○	L ERR ○	L ERR ○	L ERR ○	L ERR ○	L ERR ○		
TIME ○		PW ☆	PW ●	PW ●	L RUN ☆	L RUN ●	L RUN ●	Remote I/O module A is defective and LEDs have been unstable. (in most cases, all LEDs are turned off.)	Replace the remote I/O module.
LINE ○		L ERR ☆	L ERR ○	L ERR ○	L ERR ○	L ERR ○	L ERR ○		
or									
TIME ●									
LINE ○								L RUNs on and after remote I/O module B are turned off. indicating that the transmission cable between remote I/O modules A and B is disconnected or has come off from terminal block.	Find out the disconnected position by referring to the LED status, then repair it.
		PW ●	PW ●	PW ●	L RUN ●	L RUN ○	L RUN ○		
		L ERR ○	L ERR ○	L ERR ○	L ERR ○	L ERR ○	L ERR ○		

● : LED on, ○ : LED off, ◎ : Flashing, ☆ : On, off or flashing



		status						Cause	Corrective action			
Master module	Remote I/O module											
	A		B		C							
		PW ●	L RUN ○	L ERR ○	PW ●	L RUN ○	L ERR ○	PW ●	L RUN ○	L ERR ○	A short-circuit has occurred in the transmission cable	Find out the shorted cable in the three transmission cables, then repair it.
		PW ●	L RUN ○	L ERR ☆	PW ●	L RUN ○	L ERR ☆	PW ●	L RUN ○	L ERR ☆	The transmission cable is faulty wiring.	Check the connection for the I/O module on the terminal block and correct the faulty wiring
TIME ○ LINE ○ or TIME ● LINE ○		PW ●	L RUN ○	L ERR ○	PW ●	L RUN ●	L ERR ○	PW ●	L RUN ○	L ERR ○	L RUN on remote I/O module A and C are turned off, indicating that duplicate station number is set for A and C.	Correct the duplicated station number and restart the power.
		PW ●	L RUN ●	L ERR ○	PW ●	L RUN ○	L ERR ○	PW ●	L RUN ●	L ERR ○	L RUN on remote I/O module B is turned off, indicating that transmission speed of module B is incorrect within the setting range (0 to 4).	Set the transmission speed correctly and restart the power of the remote I/O module.
		PW ●	L RUN ●	L ERR ○	PW ●	L RUN ●	L ERR ○	PW ●	L RUN ●	L ERR ◎	L ERR on remote I/O module C is flashing, indicating that the setting switch of module C was changed during normal operation.	Return the remote I/O module's setting switch to its original position.

● : LED on, ○ : LED off, ◎ : Flashing, ☆ : On, off or flashing



		LED status						Cause	Corrective action
Master module	Remote I/O module								
	A		B		C				
TIME ○ LINE ○ or TIME ● LINE ○	PW	●	PW	●	PW	●	L RUN on remote I/O module A is turned off and L ERR is on, indicating that the setting switch of module B is set outside the setting range (transmission speed : 5 to 9, station number : 65 or larger).	Restart the power after correcting the setting switch of the remote I/O module.	
	L RUN	○	L RUN	●	L RUN	●			
	L ERR	●	L ERR	○	L ERR	○			
	PW	●	PW	●	PW	●	L ERR on remote I/O module B is turned on, indicating that module B is affected by noise. (L RUN may be turned off.)	Securely perform grounding of FG for each remote I/O module and master module.	
L RUN	●	L RUN	●	L RUN	●				
L ERR	○	L ERR	●	L ERR	○				
	PW	●	PW	●	PW	●	L ERR on and after remote I/O module B are turned on, indicating that the transmission cable between modules A and B is affected by noise. (L RUN may be turned off.)	Check the SLD connection of the transmission cable. Arrange the cable apart from the power line as much as possible. (100mm or more)	
L RUN	●	L RUN	●	L RUN	●				
L ERR	○	L ERR	●	L ERR	●				
	PW	●	PW	●	PW	●	Terminal resistor has not been attached. (L RUN may be turned off.)	Check if a terminal resistor is attached.	
L RUN	●	L RUN	●	L RUN	●				
L ERR	○	L ERR	○	L ERR	●				

● : LED on, ○ : LED off, ◎ : Flashing, ☆ : On, off or flashing