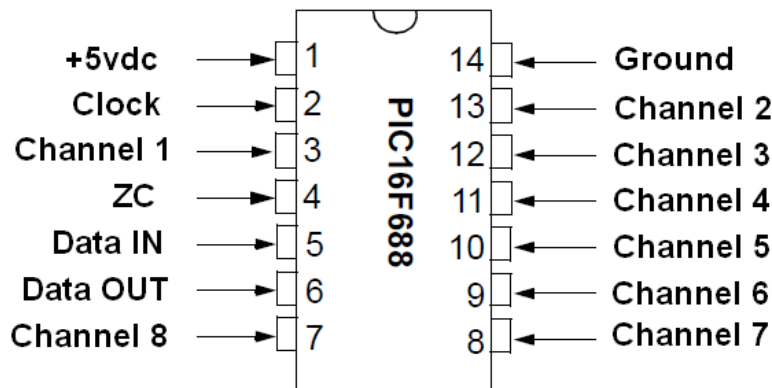


## Connecting the MiniRen PIC Adapter to a Renard Controller

This is easy to do and requires various lengths of wire, depending on the controller involved. In general, try to keep the lengths as short as feasibly possible to minimize potential outside electrical interference, which might adversely affect the performance. Individual strands of cat5 wire works fine.

1. On the Renard controller, identify which PIC16F688 is the LAST one on the board. This is very important because any overflow channel data (which normally would daisy chain to the next controller) comes from the last PIC.
2. Optional: remove the PIC from the controller's socket (if a socket is used) to protect it from heat. You will be soldering wires to the BOTTOM side of the board where this PIC resides. When done, you can reinsert the PIC back in the socket. (Note: This may not be easy with a SimpleRen32.)
3. Below is the pin out assignment for a PIC16F688 in a Renard controller when viewed from the TOP of the PIC.

**Pinout for Renard**



4. Now look at the marked header pins at JP1 on the MiniRen PIC Adapter:

- a. NC = no connection
- b. CK = Clock
- c. RX = "receive data" from the DATA OUT of the previous PIC
- d. ZC = Zero cross signal
- e. G = Ground
- f. +5 = +5vdc



5. Flip your controller over and identify the solder pads for the last PIC. Remember that the positions of the pad on the BOTTOM of the board appear reversed from where they are on the TOP.
6. Connecting the PIC Adapter to the last PIC becomes easy:
  - a. NC = not connected
  - b. Connect CK to the Clock (pin 2) of the last PIC on the controller
  - c. Connect RX to the Data OUT (pin 6) of the last PIC on the controller
  - d. Connect ZC to the ZC (pin 4) of the last PIC on the controller
  - e. Connect G to any ground point on the controller, or use pin 14 of the controller's last PIC
  - f. Connect +5 to any +5vdc point on the controller, or use pin 1 of the controller's last PIC
7. To connect the MiniRen PIC Adapter to a SimpleRen32 or a different PIC, use the same logic as outlined above in steps 4 and 6 above.