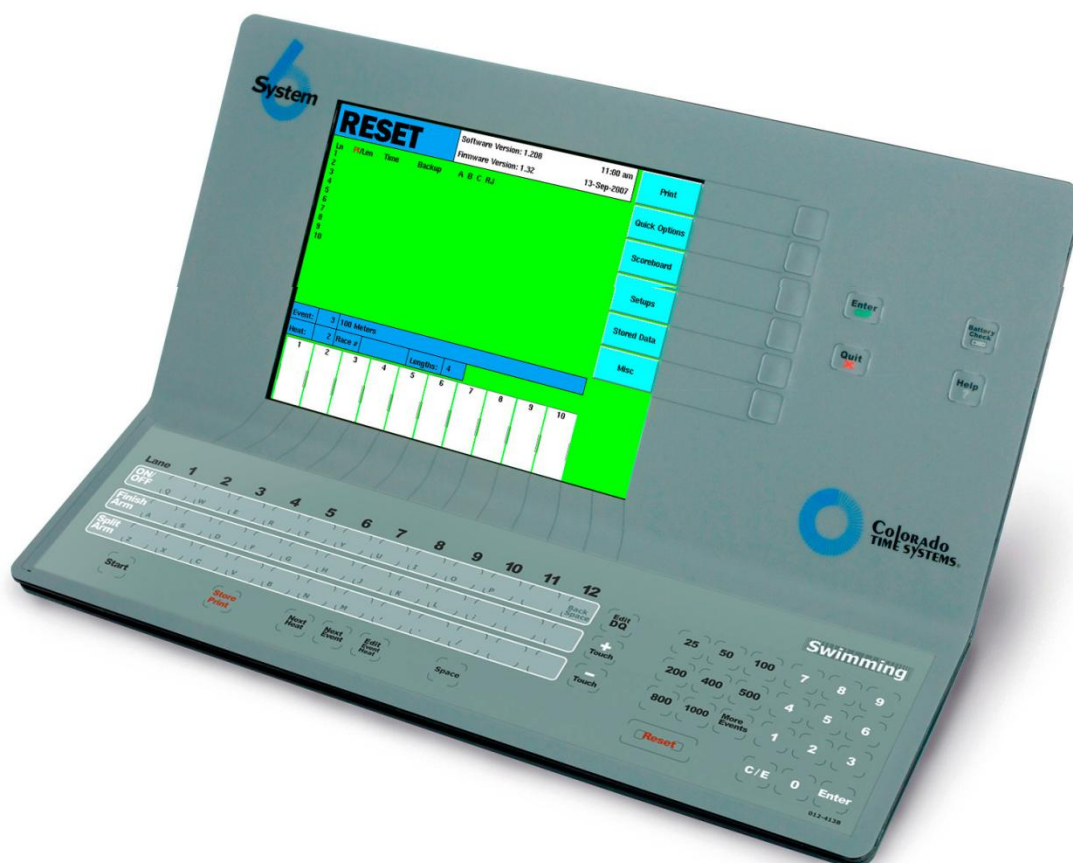# System 6 Sports Timer

# System 6 Sports Timer Tutorial

Swimming System Hardware Setup

Inputs to the System 6 include:
- An external DC power supply (check internal backup batteries)
- Near-end cable harness (lanes 1-8 or 1-10)
- Far-end cable harness (lanes 1-8 or 1-10) (if used requires the 50 m extension cable)

Outputs from the System 6 include:
- Scoreboard
- Com port for computer running meet management software – Typically Serial COM 1
- Printer port – USB
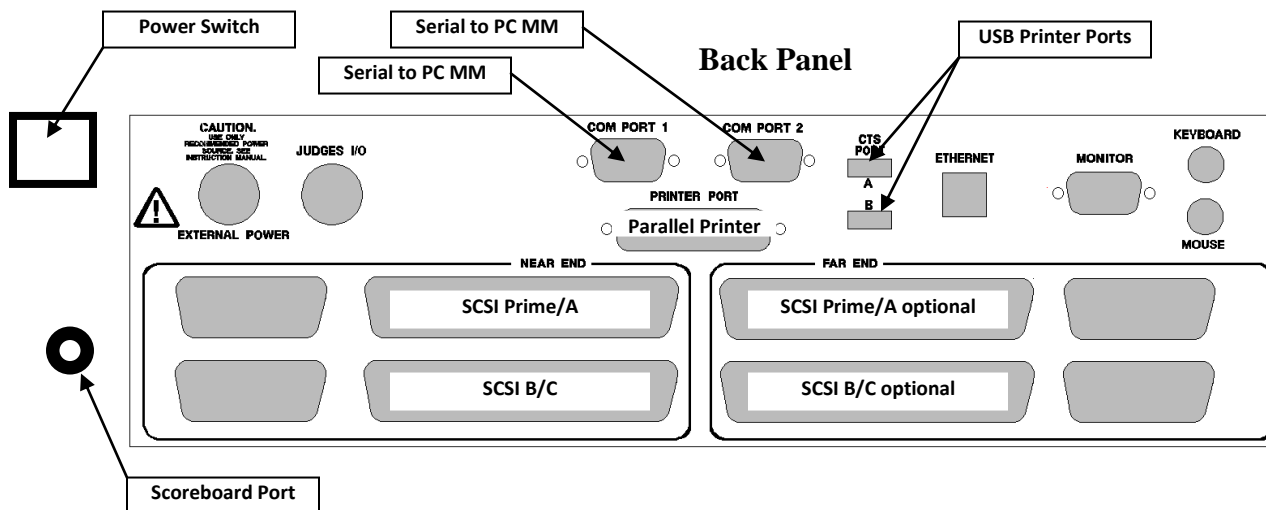
Connecting the Cables (typical scenario using only the Prime/A Cable Harness

1. Connect the external DC power supply cable to the External Power port on the back of the System 6 Console and plug into a 120V power source
2. Connect the 9 pin Serial cable to the com 1 on the back of the System 6 Console, then connect the other end of the Serial cable to com 1 on the Meet Manager PC
3. Connect the Printer USB cable to either of the USB Printer ports on the back of the System 6 Console and the other end to the USB Printer
4. Connect/Seat the SCSI connector of the Prime/A cable to one of the "Near End" SCSI ports on the back of the System 6 Console
5. Connect one end of the start cable (banana plug) to either the Prime/A Start or Back-up Start port and the other end to the Timer Start port on the Champ Start system
6. Connect the Scoreboard communication cable to the Scoreboard Port on the back of the System 6 Console
7. Connect one back-up button per lane into the Cable Harness "A" port

Battery Back-up

An internal lithium ion battery provides backup power in case of emergency or power outage. To charge the battery, plug the System 6 into a grounded power outlet with the unit turned off. If the unit is left on the batteries will not charge. The charge time of the battery is 3 hours. The battery will provide approximately 45 minutes of usage time. This can be increased to 1 hour after 4 to 5 cycles of fully charging and fully discharging.

Prior to Starting the Meet

Assuming the timing equipment (touchpads, cables, etc) is in place.

1. Meet setup should be performed at least 3 hours prior to meet start time.
2. Select a site for the console that is in close proximity to the starter (this is a best practice for communication)
3. Connect all cabling (this should have been completed during the hardware setup step)
4. Turn System on
5. Configure the console for your pool and meet (these are common, most often used settings, refer to the System 6 Manual for more comprehensive detail)
   - Check the number of lanes (typically 8)
   - Pool Length (25 or 50
   - Race units (yards or meters)
   - Lanes may be remapped if only using some of the lanes (ie 8 of 10 lanes, renumbering lane 1 to 2, 2 to 3, etc), this is not typical, recommend leaving defaults
   - Check that the lanes are not reversed or reverse if need be (if lane 8 is the nearest to the console, lanes need to be reversed, if lane 1 is nearest to the console, this is normal)
   - Configure scoreboard
   - Configure Printer Store/Print Format
     - Under Setups/Printer, select Option "5"
       1. Elite for 8 lane pools
       2. Condensed for 10 lane pools
   - Selecting or Configuring/Adding a Printer
     - For USB printers: To select or add USB Printer (Be sure the printer is connected via USB and turned on before proceeding with the install)
       a. From the Swim Program – select **Misc-Change Sport-Yes-Install** (you are at the main menu)
       b. Select **Configure Printers-Add Printer**
       c. Assuming your printer is recognized, select **Select**
       d. **Select** the appropriate driver for your printer from the list
       e. After selecting the driver, select **Test Printer**
       f. Assuming the test print is successful, then select **Set Selected As Default**
       g. Select **Quit** twice
       h. Select **Swimming** to enter the Swim Program
       i. Select **Setups**, then select **Save Setups**
       j. When you print your race, you may have to select **Form Feed** to print (depending on your printer model)
       k. FYI - Under **Setups** the printer select option is for parallel printers only, this has nothing to do with USB printers

- For Parallel Printers
    a. Select **Setups**
    b. Select **Down** until you are on the **Printer** option
    c. Select **7** repeatedly until you see your printer model
    d. Select **Save Setups**
6. Download the meet events from the Meet Manager PC to the System 6 console
7. Save your setups and shutdown the System 6 (be sure to use the proper shutdown procedure below)
    a. Exit the Swim Program
    b. On the soft key menu, choose **Misc**
    c. Choose **Change Sport**
    d. Select **Yes** that you wish to leave that sport
    e. Select **More**
    f. Select **Shutdown**
    g. Select **Yes** that you want to Shutdown
    h. When the screen turns white, turn off the unit.
8. Turn the System 6 on
9. Run a couple of test races,
    - Set the event on a non-meet event number out of range from what the meet is using
    - Set the race to a short race (SC 50 yd or LC 100 m)
    - Start race from the Start System
    - Wait until the system is armed
    - Test all touchpads and backup buttons
    - Store/Print (test printer)
    - Reset the console

Running Races

1. Be sure the console has been reset
2. Be sure the console is set on the correct event and heat
3. Turn off empty lanes
4. After the race is started, monitor touches for each lane (perform – or + touches as needed)
    - (-) touches typically cause when the swimmer misses or soft touches the pad
    - (+) touches typically required during relays when swimmers hang on the pads too long
5. Finish arm on the last lap if needed
6. When all swimmers have finished select Store/Print, then Reset
7. In cases where there is a .3 time difference in the touch pad and the backup button, a screen will pop up asking if you want to use the backup times. Do not use the backups, select quit for the screen to go away. Then "Reset" the console.
8. In cases where a swimmer finishes and console does not record a finish, turn that lane off, then select Store/Print, then Reset. Backup times will still be recorded for that lane.
9. Advance to the next Event or Heat
10. All lanes turned off from the previous race should now be back on
11. Repeat steps 3-8, etc

Trouble Shooting

1. Diagnosing why the console does not get a start signal from the Champ Start System. Select one or more of the fixes below.
   a. Check the banana plug connectors on the start cable connecting the hardness and the start system for broken wires or badly worn connectors. If bad replace connector or start cable
   b. Move the start cable connector from the start port on the harness to the backup port on the harness.
   c. Check the SCSI connections on the harness and the back of the System 6. Gently clean with a fine brass brush. Spray with WD-40 if available.

2. Diagnosing why no touches register on the System 6 from one of the touchpads during a race.
   a. Check the SCSI connections on the harness and the back of the System 6. Gently clean with a fine brass brush. Spray with WD-40 if available.
   b. Check the banana plug connector on the touchpad for wear or visible broken wires. Replace the pad if connectors are visibly broken.
   c. Plug a back-up button into the Prime port on the harness and test to see if it registers on the System 6.
      - If it does register, then replace the touchpad.
      - If it does not register, this indicates the port on the Prime/A harness may be bad. Replace the Prime/A harness. Be sure step "a" has been performed first.
   d. Check to see if the touchpad is blinking touches on the console when swimmers are not touching the pad. (this indicates the pad is shorting and the pad needs to be replaced)

3. Diagnosing why no touches register on the System 6 from one of the back-up buttons during a race.
   a. Check that the timer is pressing the back-up button
   b. Check the SCSI connections on the harness and the back of the System 6. Gently clean with a fine brass brush. Spray with WD-40 if available.
   c. Check the banana plug connector on the back-up for wear or visibly broken wires.
   d. Replace the Back-up button, if it does not register, this indicates the port on the Prime/A harness may be bad. Replace the Prime/A harness. Be sure step "b" has been performed first.

4. Diagnosing when there are no intermittent touches register during the race, but a finish is registered.
   - Check that the touchpad for that lane is plugged into the Prime Port and the Back-up Button is plugged into the "A" port. The wires are switched.

5. Diagnosing when the starter keys the microphone to talk, the race starts.
   - The speaker wire and timer start cable are most likely switched at the Champ Start System. Check connections and correct

FAQ's and Best Practices

1. What to do when the start system fails to start the timing console:

   - The console operator should manually start the race at the console, this will provide data suitable for finish order purposes. Be sure to mark on the printout, the race was manually started at the console.

2. When the System 6 is Shutdown and rebooted the meet data is not available or on the wrong meet.

   - Each time the System 6 is shutdown and rebooted, a new meet is created. The meets and races are still in the console, but stored under a different meet. From the PC Meet Manager PC select the correct meet on the System 6

3. Selecting a site in close proximity to the Starter is key for communicating. When the System 6 is located in a meet operations room behind glass windows, this creates communication problems.

4. The System 6 Console operator performs a lot better when they are left alone and engaged in side conversations.

5. System 6 Console operators familiar with the flexibility and forgiveness of the System 6 are the best operators. Examples

   - The System 6 does not have to be set on the correct event, heat or distance prior to starting the next race. These settings can easily be adjusted during the race, as long as it is done prior to the finish.
   - Previous race stored data can be accessed and printed during races, preferably longer races, such a 200 yd or meter race.