Weightlifting Competition Score Keeper

Version SCT 2.0 (rev 2019-4-26)

Overview

Weightlifting Competition Score Keeper is a program which provides the capability to conduct real time score keeping operations at a Weightlifting competition. It has several distinct functions or "Tasks".
The tasks and the abbreviations used for each are:

Score Keeper	**SKP**	
Marshal	**MAR**	
Time Keeper	**TMK**	
Jury	**JUR**	
Attempt Board – Detailed	**ATT**	
Attempt Board – Simple	**ATS**	
Score Board – Dynamic	**SBR**	(sorted by lift order)
Score Board – Static	**SBS**	(sorted by start number)
Display Clock	**CLK**	
Decision Lights	**DLB**	
Broadcast Board	**WEB**	

The **Score Keeper** displays the list of athletes of the current session in the order of lifting. The operator inputs the 'good lift' or 'no lift' decisions. If used in conjunction with the Referee Light System the referee decisions can be recorded automatically. The operator also inputs declarations and changes of weight if there is no accompanying **Marshal** task in operation.

The **Marshal** displays the list of athletes of the current session in the order of lifting. The operator inputs the declarations of weight and changes of weight for each attempt as directed by the athletes and/or their coaches.

The **Time Keeper** displays and keeps the time allowed to the current athlete for his/her attempt.

The **Jury** display requires the use of the Referee Light System. It allows the jury members to render their decisions, to see the real time decision of the referees, to pause the competition, and to summon the referees for consultation.

The simple **Attempt Board** displays the name and team of the current athlete, the time on the clock, the attempt number, the weight of the barbell. The detailed **Attempt Board** will also display then next 3 athletes to be called to the platform and the current records for the category.

The **Score Board** displays the list of the athletes ordered either by start number or lifting sequence. This is intended for the athletes and coaches in the warm up area, technical officials, and the viewing audience.

The **Display Clock** is simply the display of the time allowed to the current athlete.

The **Decision Lights** is a simple display of the decision of the referees.

The **Broadcast Board** is very similar to the attempt board. The colors, fonts, and placements of the items are selected to allow someone with the appropriate video software to collect "pieces" of the board for inclusion in an ongoing live stream or webcast broadcast.

The collection of tasks required to execute a single session of weightlifting on a single competition platform is referred to as a **Session**. The **Score Keeper** task is the primary task of the program and serves as a communication hub for all the other tasks on client computers. There can be only one **Scorekeeper** in a **Session**. Likewise, there can be only one **Marshal**, one active **Time Keeper**, and one **Jury** in as **Session**. There is no limit to the number of **Attempt Boards**, **Score Boards**, **Display Clocks, Decision Lights,** or **Broadcast Boards** in a **Session**.

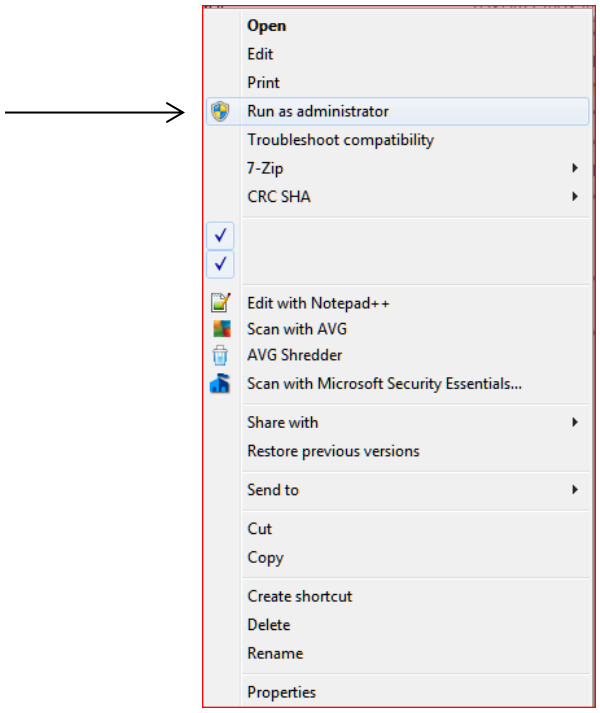
Installation

The program has been tested on Windows 8 and 10. All of the necessary files are in the 'Distribution' folder.

There are several files included with the installation package:

ScoreKeeper.pdf	- This document.
ScoreKeeper.exe	- Executable progam
*.ocx	- Microsoft ActiveX files
*.dep	- Visual Basic Dependency files
*.dll	- Microsoft Dynamic Link Library
install.bat	- Installation script

The install script must be executed by the administrator. To do this right-click the install.bat file and select "Run as administrator" from the menu. This copies the Dynamic Link Library and ActiveX files to the appropriate windows folder and properly registers them with windows. The executable program may be manually copied to the desktop or any other folder.



Hardware

There is a Referee Light System (RLS) which includes three (3) decision boxes, a down signal, a referee junction box, and a time keeper console that works in conjunction with this software. In addition, there is a jury junction box and five (5) decision boxes for the jury. The referee junction box, jury junction box, and time keeper console connect via USB. The operation of the software does not depend on the Referee Light System. However, the software has no way of knowing the individual decisions of the three referees and therefore cannot display their decisions without the hardware.

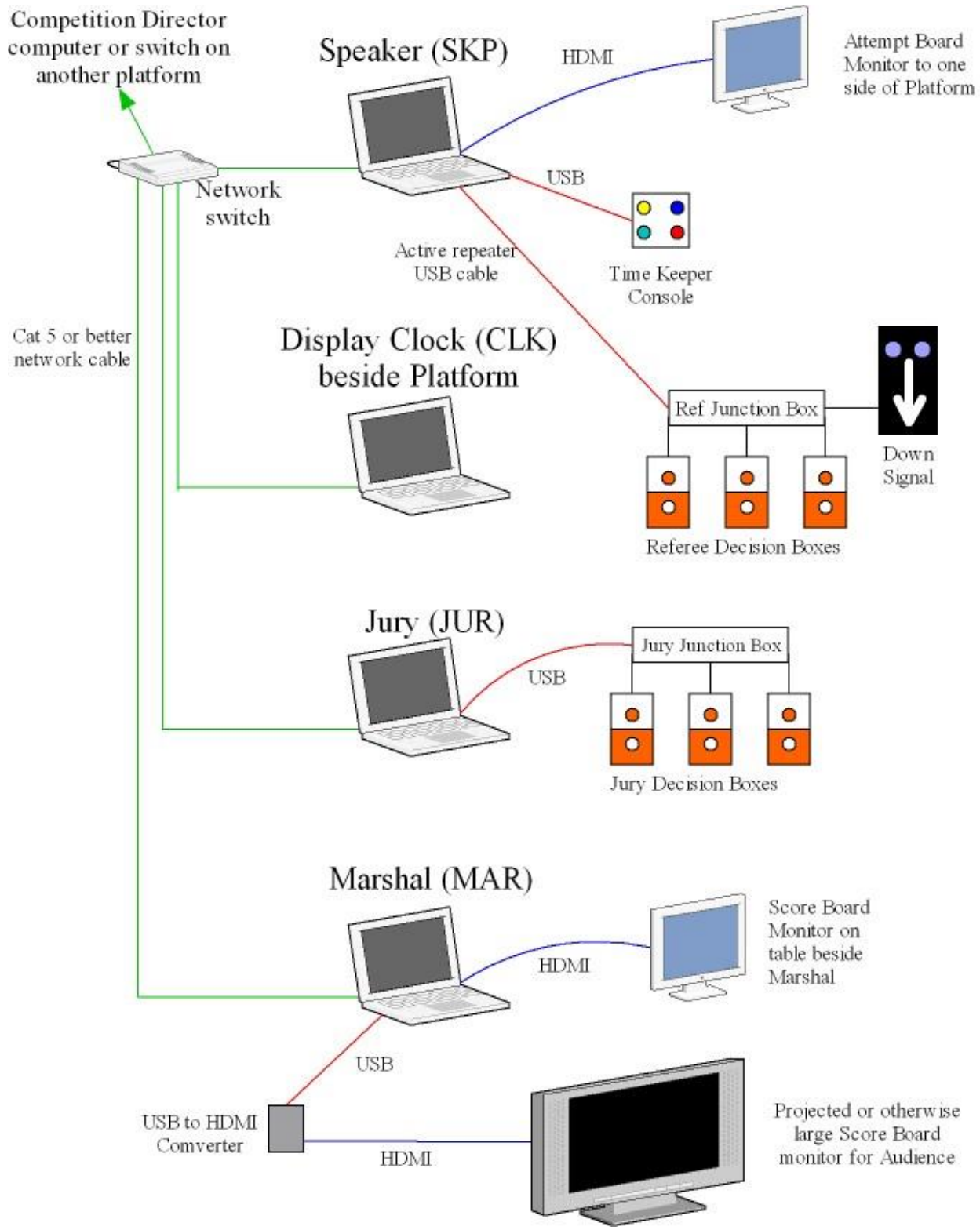
The hardware is based on the Arduino Uno micro controller so the drivers for the Arduino must be installed on any computer into which one of the USB devices of the Referee Light System is plugged. If the Arduino windows drivers are properly installed the Score Keeper software will automatically recognize the devices. The Arduino Uno device driver installation package is available on the www.SimontonCompTech.com website.

Computer Setup

The Score Keeper may be run on a single computer or multiple computers on the same network. A wired network is highly recommended over a wireless network. If you wish to suffer anxiety and frustration due to unexplained communication problems then use a wireless network. A typically setup at our national meets requires four (4) computers per platform. The speaker will operate the SKP (main computer). A computer running the MAR task will be on the marshal table. The computer on the jury table will run the JUR task. We will also place a computer near the front corner of the competition platform opposite of the athlete entrance. This one will run the CLK (Display Clock) task. External monitors are attached to one or more of the computers to display the SBR or SBS (Score Board) tasks or the ATS or ATT (Attempt Board) tasks. The following page contains a diagram of the described typical setup.

Known Problems

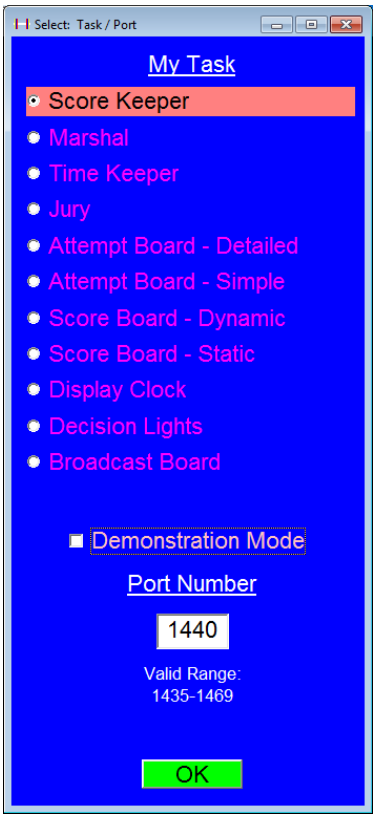
Under certain as yet undetermined conditions the TMK clock running on the SKP will run too slowly. A more accurate description is that it will have intermittent pauses during the countdown. The symptom is that it will count a few seconds normally and then pause without changing the countdown for a couple of seconds. The pattern will repeat itself. It will only pause for two (2) seconds, but the duration of the normal countdown may range from 3 seconds to about 10 seconds. When this happens you should shut down the SKP process completely. The currently open session does not have to be closed first. Restart the SKP program and the previously open session will automatically open again and the tasks on the client computers will automatically reconnect. The shutdown and restart takes only about 10 seconds to perform. Ideally this would be done while the loaders are on the platform following an attempt (successful or not). That way the time on the clock is not an issue. If the time on the clock is an issue, such as during the 10 minute break after the snatch portion of the session then start a count down on an available iPhone or other device so that you can set the clock to the appropriate time once the program restarts.


Competition Director computer or switch on another platform
Speaker (SKP)
HDMI
Attempt Board Monitor to one side of Platform
Network switch
USB
Active repeater USB cable
Time Keeper Console
Cat 5 or better network cable
Display Clock (CLK) beside Platform
Ref Junction Box
Down Signal
Referee Decision Boxes
Jury (JUR)
Jury Junction Box
USB
Jury Decision Boxes
Marshal (MAR)
Score Board Monitor on table beside Marshal
HDMI
USB
USB to HDMI Comverter
HDMI
Projected or otherwise large Score Board monitor for Audience

Operation

Double click ScoreKeeper to begin execution. The ‘splash’ window appears which gives name and version information.

Click the ‘GO’ button.
The Task/Port selection window appears:



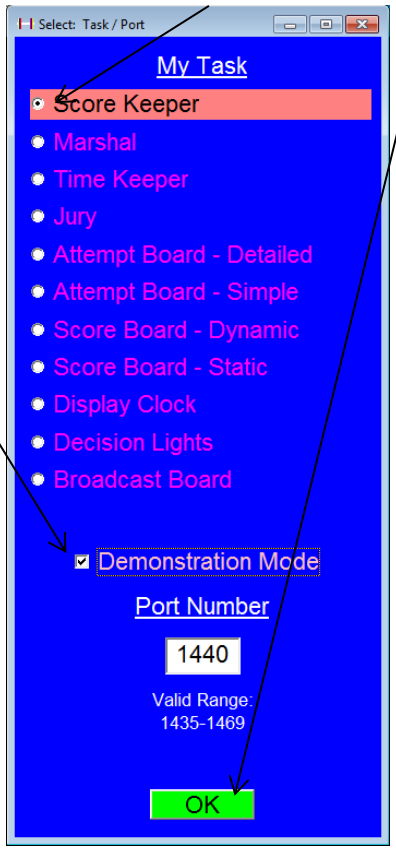
Select the task to run on this computer. (*Geek mode on*) The computer running SKP is called the **Server**. Computers running the other task are called **Clients**. Usually the default port number will suffice. Situations in which some other entity on the local network is using the default port number will require selecting an alternative. Also, if more than one SKP is running on this computer each instance will need distinct port numbers. The IP address of the Server and port number used by the SKP are the information which will be needed by the Clients to initiate communicate with the Server. (*Geek mode off*)

Each computer can run 3 tasks simultaneously. The task selected here is the **primary task**. Additional tasks may be selected from the menu that is available in the upper left corner of the primary task on the SKP and each Client. Those tasks are referred to as **secondary tasks**. The SKP, MAR, and JUR can only be primary tasks. The TMK can only be a **primary task** on a client computer. However, the TMK can be a **secondary task** of the SKP. The Server (computer running the SKP task) can have 2 secondary tasks in addition to the TMK task. More will be discussed about that later.

The following sections deal with each of the nine (9) primary tasks.

<u>Score Keeper</u> (demonstration mode)

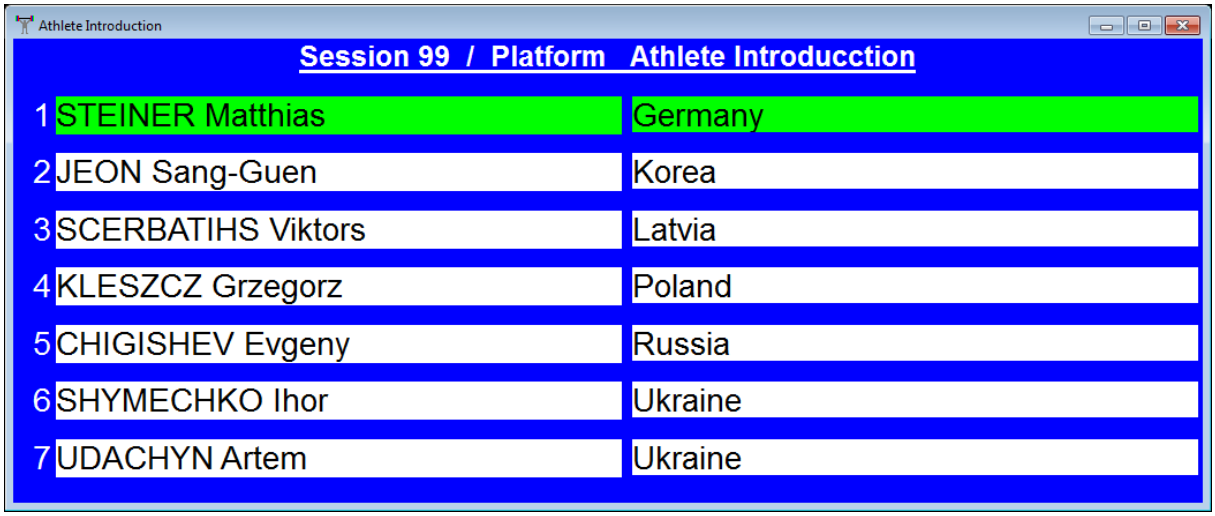
Check the 'Demonstration Mode' Box, select 'Score Keeper', and Click 'OK'.



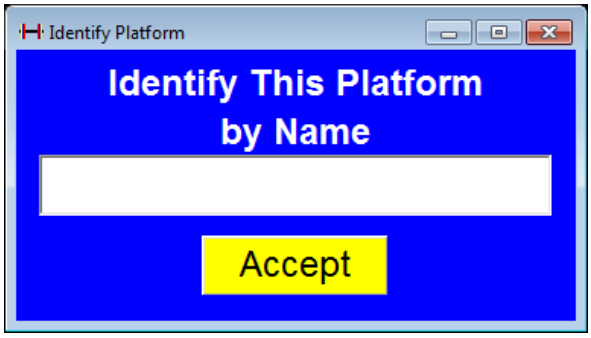
The task selection window disappears and is replaced by the SKP demo window.

Please note the IP address of the SKP on the bottom left of the window. Depending on the configuration of the network this information may be needed by a client in order to communicate with the SKP. The lower left of the screen is where general messages are displayed. If the message has an "X" on its right edge then the operator may click the "X" to cause the message to disappear. Notice also the "USB Referee Junction Attached" message. That will appear when the Referee Light System is attached to a USB port on the computer.

The Introduction button invokes the following window which lists each athlete and his/her team (or country) arranged in the order of introduction. This is to assist the speaker during the introduction. Notice the first athlete is highlighted in green. After the first athlete is introduced the speaker can press the "Enter" or "Tab" key on the keyboard and the next athlete will be highlighted. This allows the speaker to immediately know which athlete is next in line to be introduced if the speaker looks away from the screen for any reason (such as the natural inclination to see that the introduced athlete is present and acknowledged).



The Platform button allows the speaker to identify the platform if the competition has multiple platforms. A mouse click on it will invoke the window in which the speaker may type in the name of the platform.



If the particular platform is named "purple" then the speaker types "purple" and clicks the accept button. The platform button on the main screen changes to Platform PURPLE. The Platform button will change colors to most of the primary colors. This is just to serve as a visual cue or reminder to the speaker. Currently this is only a cosmetic feature. Later versions of software will incorporate this as a component in the communication with the Competition Director software.

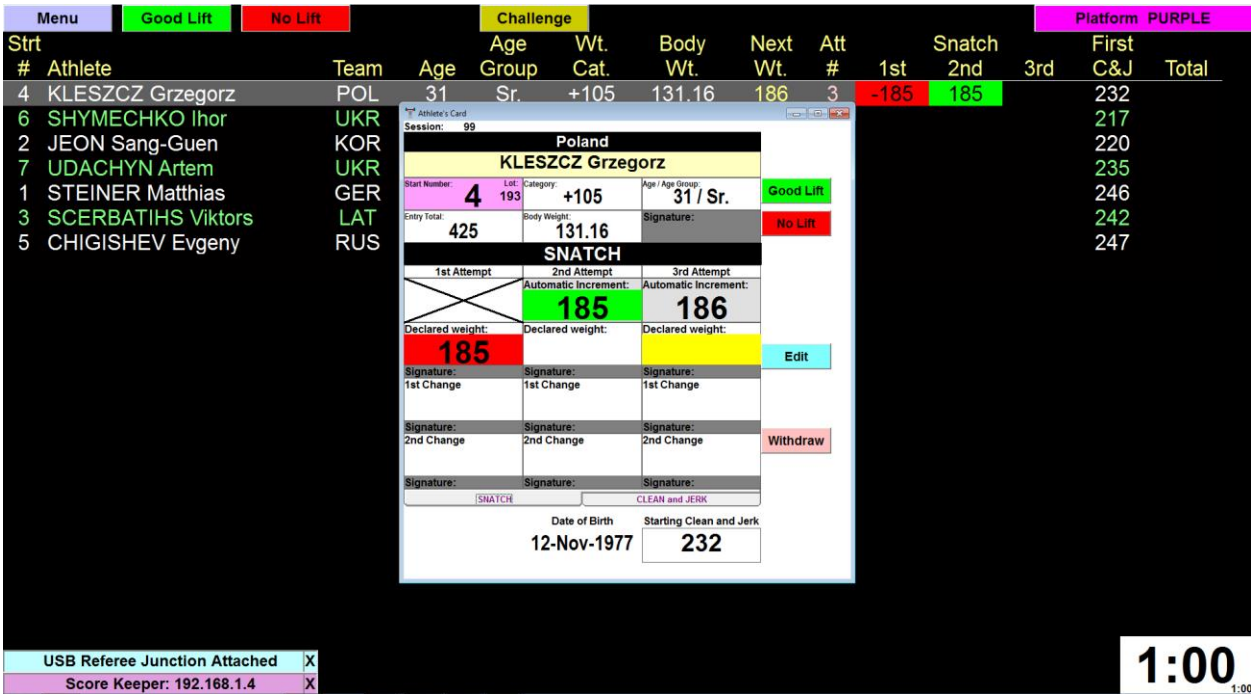
Upon completion of each attempt on the platform the operator clicks either Good Lift or No Lift. Notice that both buttons disappear for about 2 seconds after either is clicked. This prevents an accidental double click event. After clicking No Lift the screen will appear as follows:

Strt #	Athlete	Team	Age	Age Group	Wt. Cat.	Body Wt.	Next Wt.	Att #	Snatch 1st	Snatch 2nd	Snatch 3rd	First C&J	Total
4	KLESZCZ Grzegorz	POL	31	Sr.	+105	131.16	185	2	-185			232	
6	SHYMECHKO Ihor	UKR	22	Sr.	+105	130.25	193	1				217	
2	JEON Sang-Guen	KOR	27	Sr.	+105	155.49	195	1				220	
7	UDACHYN Artem	UKR	28	Sr.	+105	144.09	197	1				235	
1	STEINER Matthias	GER	26	Sr.	+105	145.93	198	1				246	
3	SCERBATIHS Viktors	LAT	34	Sr.	+105	144.97	198	1				242	
5	CHIGISHEV Evgeny	RUS	29	Sr.	+105	124.13	200	1				247	

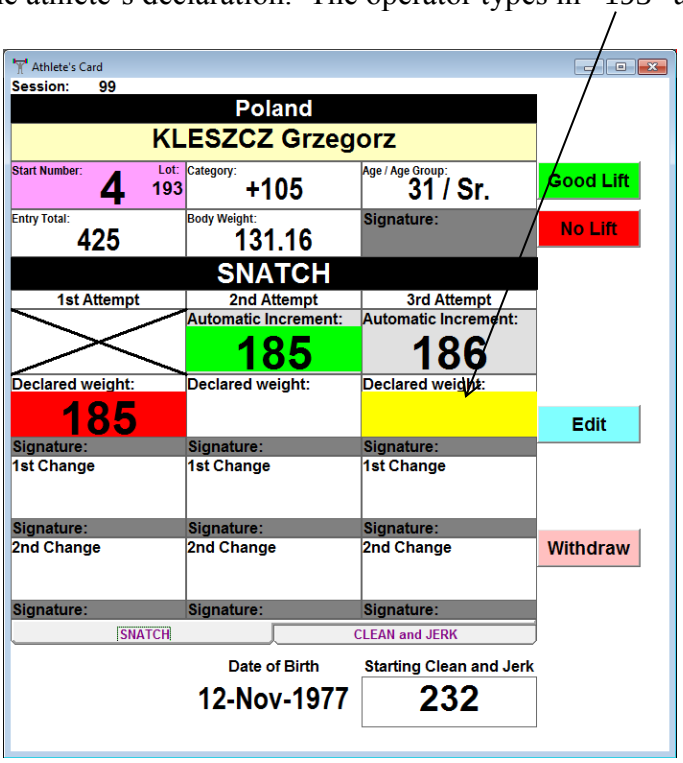
Notice that the Introduction button has disappeared and the Challenge button has appeared. More on this later.

Click Good Lift and the following screen will appear:

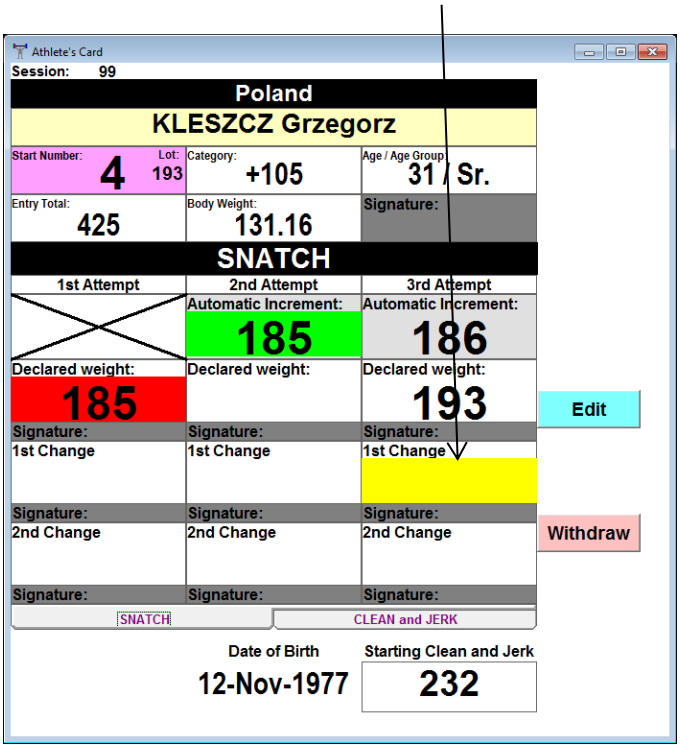
The highlighted line indicates the athlete who took the last attempt on the platform. In this example, KLESZCZ failed his first attempt, took the automatic for his second and was successful. If he declares 193 for his third attempt the operator must click on his name (or anywhere on the row). This will display the athlete's card for KLESZCZ.



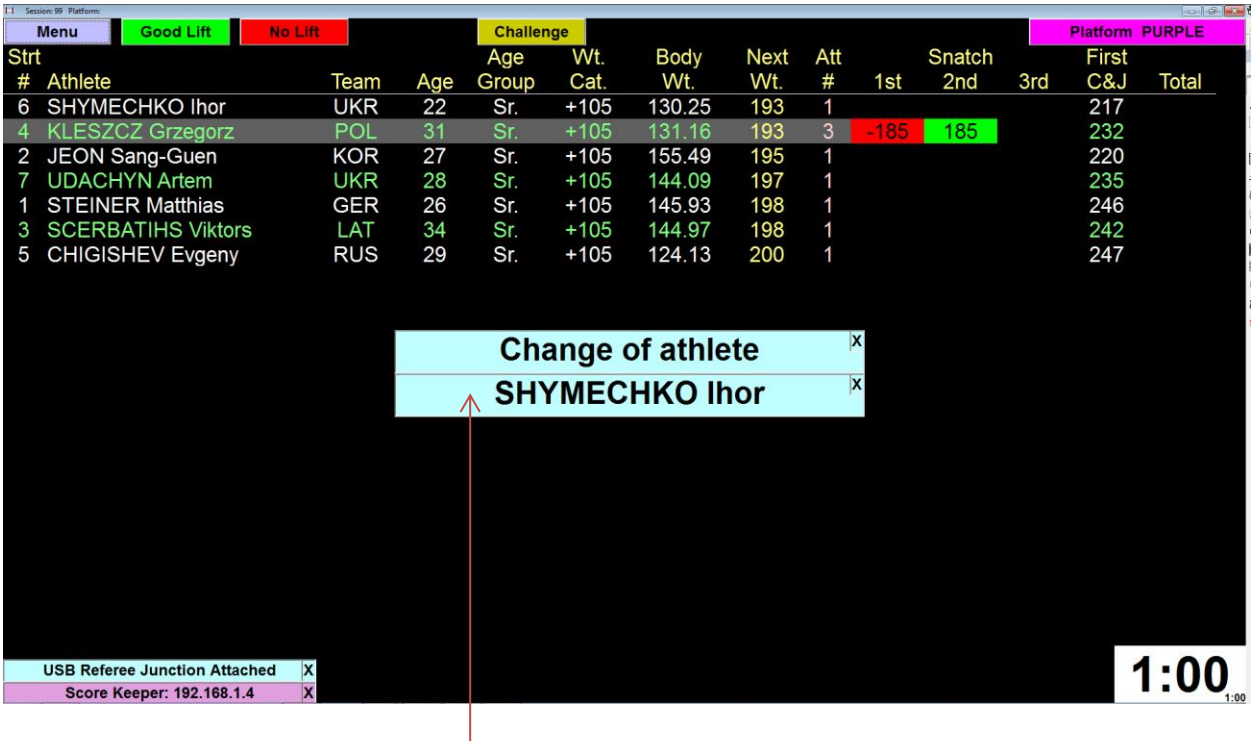
Any weightlifting marshal will immediately recognize the card and has a good idea of how to manipulate it on the screen with little or no instruction. The operator clicks the yellow declaration area in the 3rd Attempt of the Snatch. This is the area for the athlete's declaration. The operator types in "193" and presses "enter".



The declaration has been accepted. Notice the area for the 1st change is now marked in yellow.

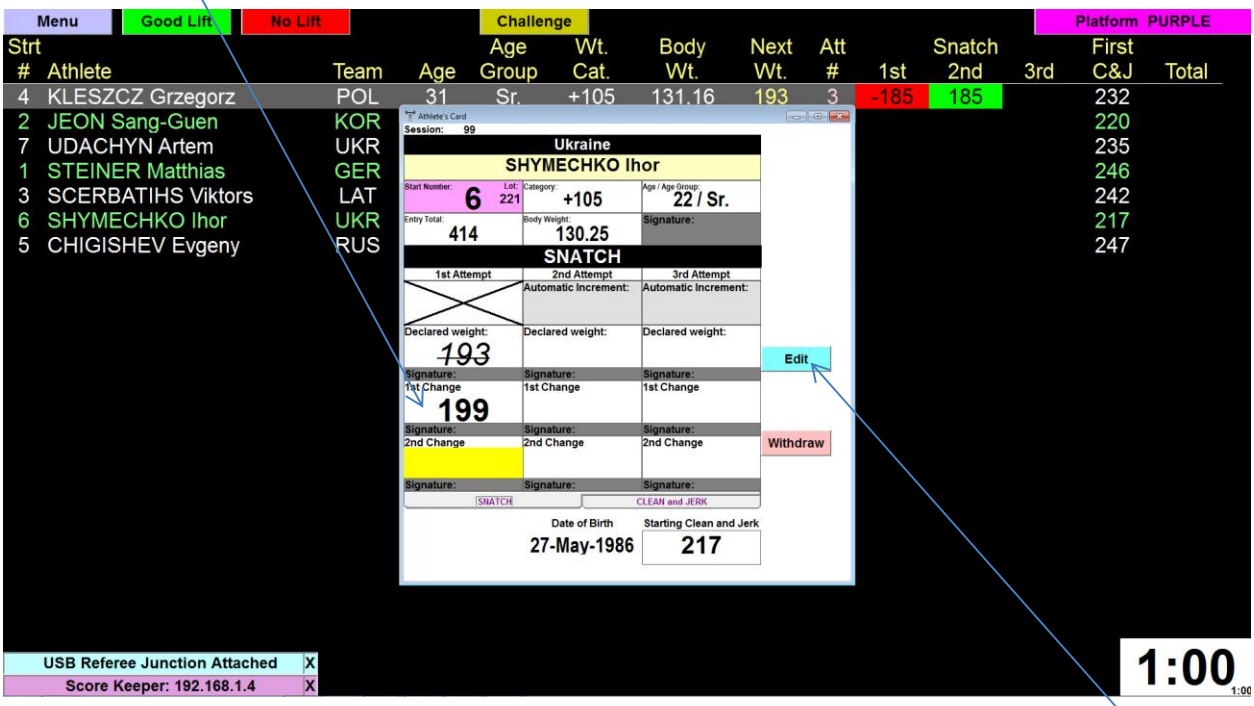


KLESZCZ is no longer the next athlete on the platform. Notice that Good Lift and No Lift are no longer visible on his card. Those buttons are only visible on the card of the athlete who is the currently scheduled athlete on the platform.

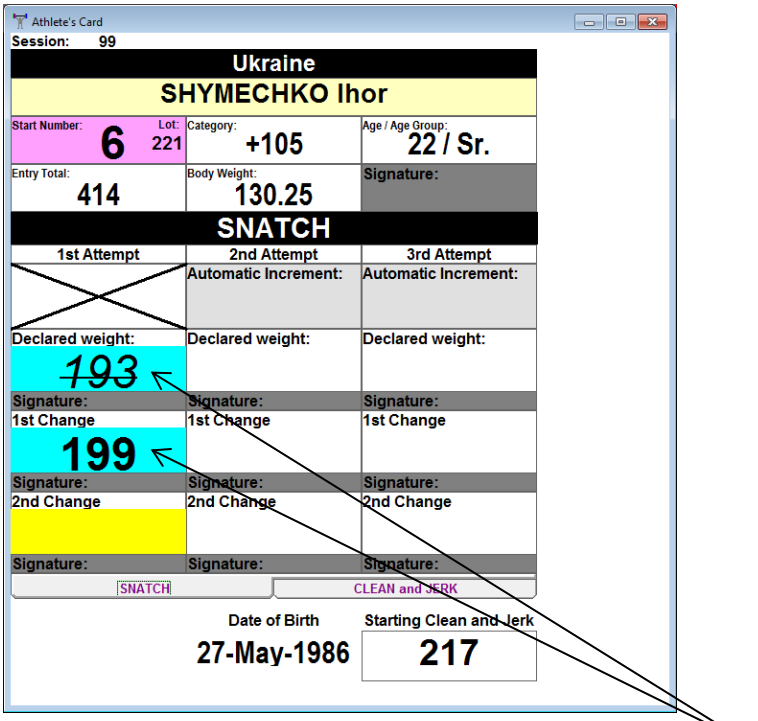


Notice the appearance of the competition messages (as opposed to general messages). This is to inform the speaker when there is a change to either the weight or athlete on the platform. These messages will disappear whenever the clock is started (more on that later) or the "X" on the right of each messages is clicked.

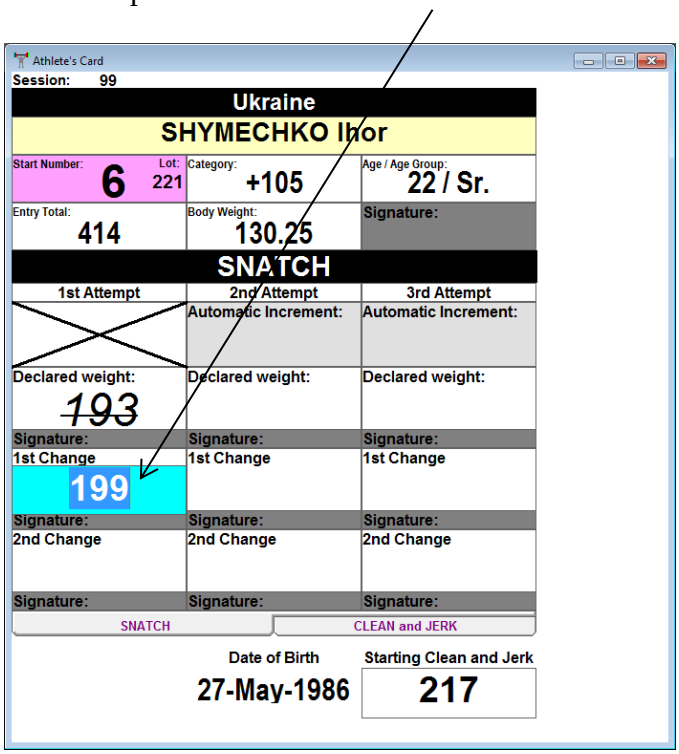
SHYMECHKO now requests "194" for his 1st change. The operator clicks his name to display his card and mistakenly enters "199".



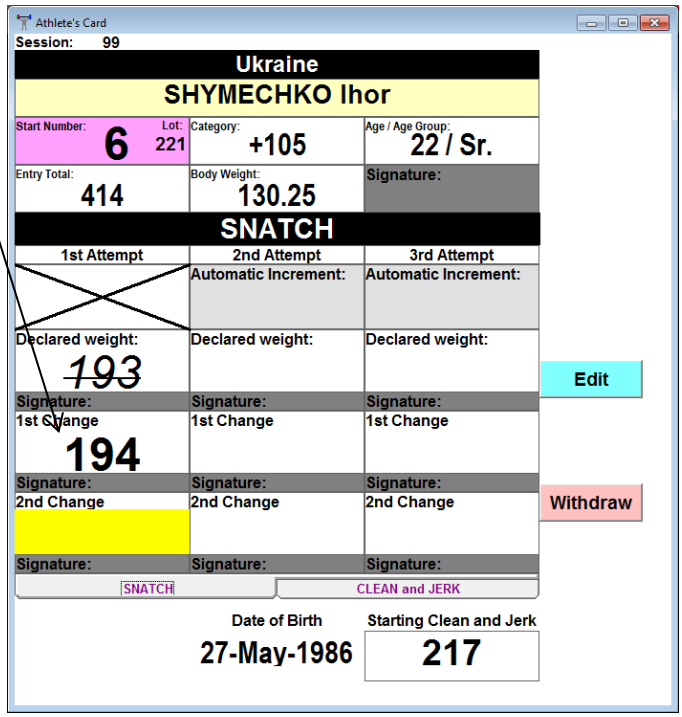
The technical term for this situation is "oops". Rather than panic, the operator coolly clicks the Edit button.



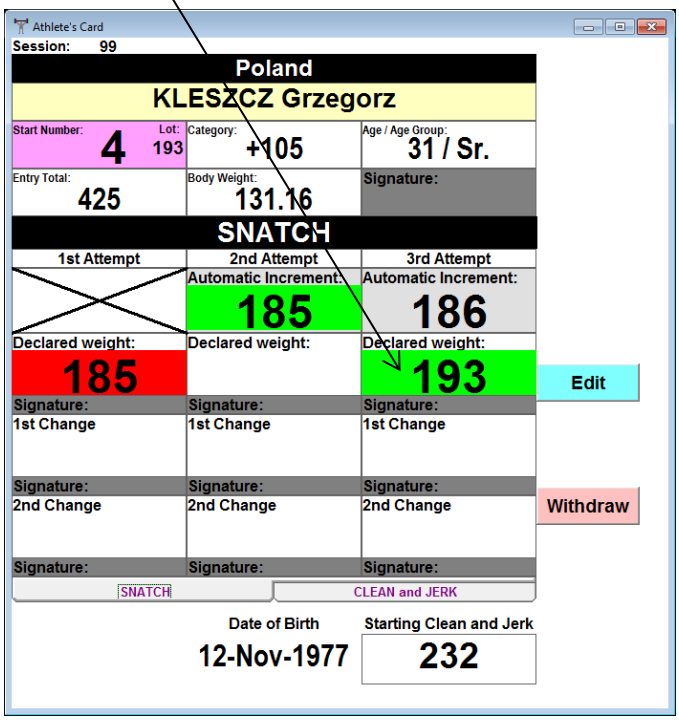
The card is now in edit mode and the fields which can be changed are highlighted in aqua (or cyan maybe). A click of the 1st change field allows the operator to correct the mistake.



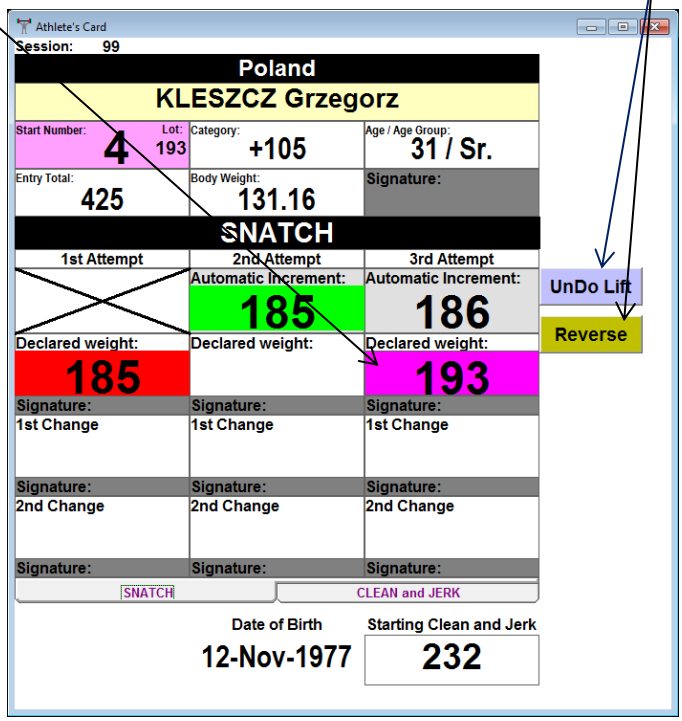
The operator types “194” and presses enter and the competition continues without a hitch.



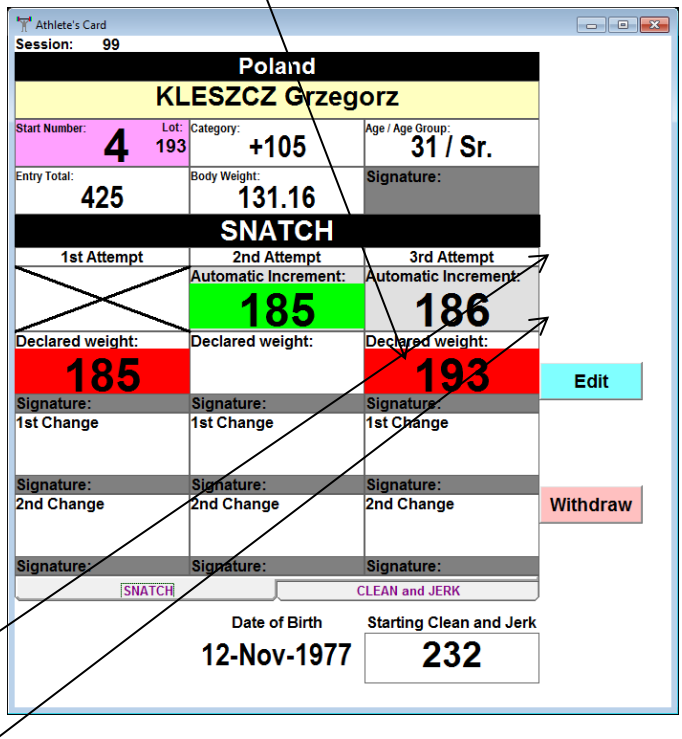
KLESZCZ is once again the athlete called to the platform. He lifts 193, replaces the barbell onto the platform following the down signal, and the operator clicks Good Lift. Then the operator notices that at least 2 referees indicated a “no lift” rather than a “good lift”. Another oops. Again the calm operator displays KLESZCZ’s card. This time the operator clicks the green background of the 193 successful attempt.



The green changes to magenta (some would say purple) and a couple of new buttons appear.



In this case the operator presses Reverse and the oops never really happened (or so says the operator).



Notice that UnDo Lift and Reverse are no longer visible.

Any competent marshal knows that declarations MUST be entered on the paper card even if it is the same weight as the automatic. The same is true for the onscreen card. If the data of the onscreen card does not agree exactly with that of the paper card, then someone committed an oops which needs to be immediately rectified.

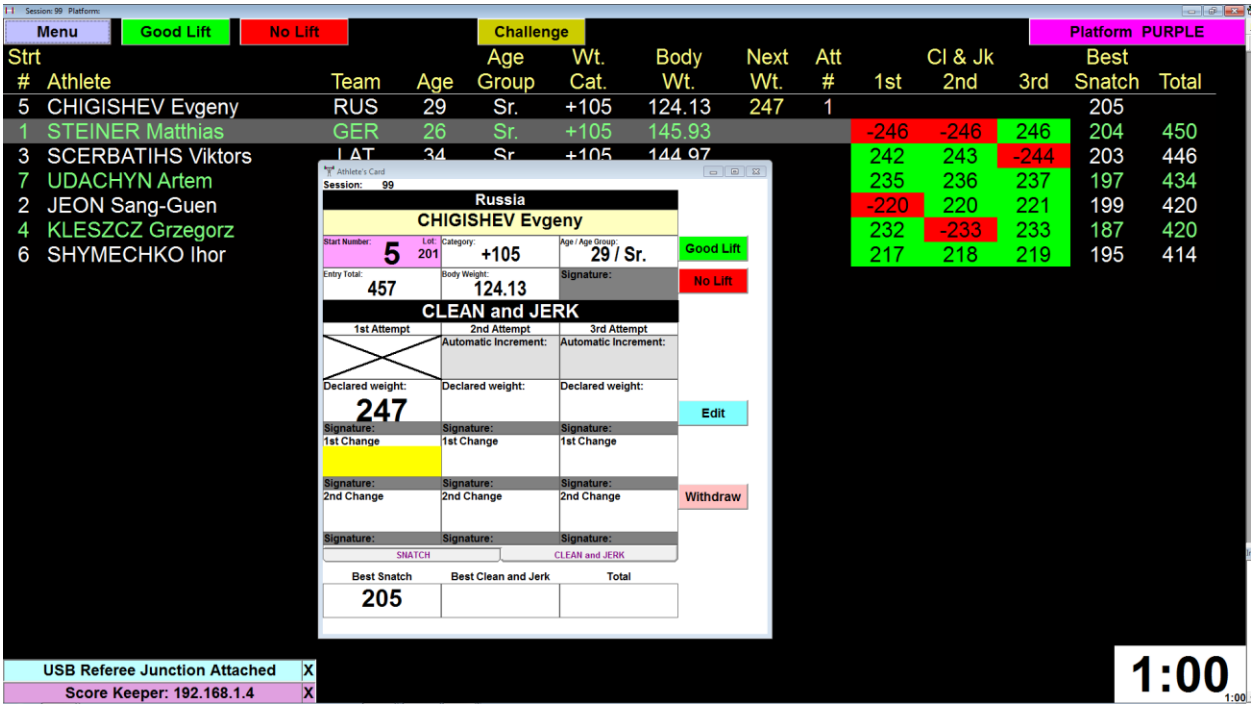
Should KLESZCZ wish to challenge the decision the speaker clicks **Challenge**. The competition halts, clock (if running) stops, and the challenge message will appear on the speaker's screen as well as the screens of the clients. Notice the appearance of the **Resolve** button.

The **Challenge** and **Resolve** buttons are also available on the Jury's screen. When the situation has been resolved by the jury the speaker clicks **Resolve**. If the jury did not overturn the decision the completion continues with no additional steps. If the jury overturns the decision then the speaker can reverse the decision as seen in a previous example.

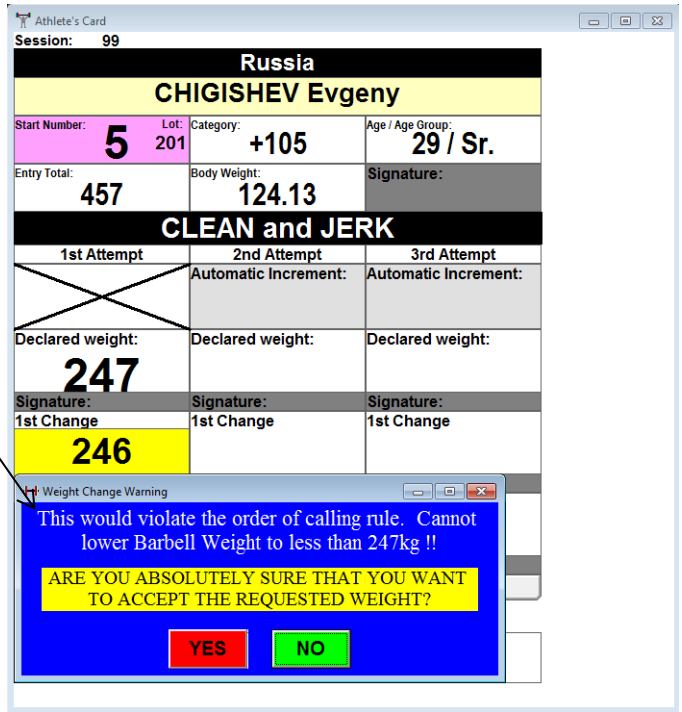
Prior to the last snatch attempt the screen would appear as follows:

Immediately following the decision entered for the last snatch the screen changes to the Clean and Jerk view.

The clean and jerk session is underway and quite obviously the athletes were not very aggressive in their choice of weights.



CHIGISHEV is the only athlete remaining and has yet to attempt his 1st clean and jerk. His coach decides to lower his opening attempt so requests 246. The operator attempts to enter the change and receives a nasty message.

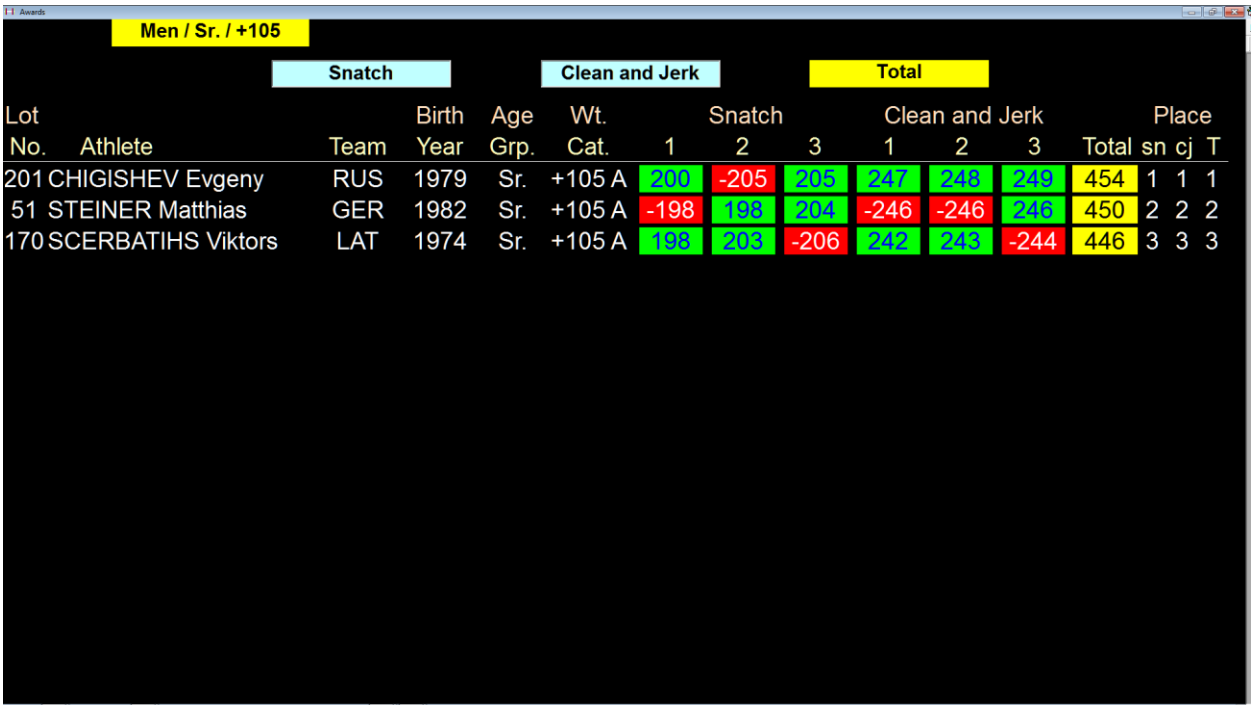


Under normal circumstances the operator would click "NO". However, as any experienced technical official or meet director knows, not all circumstances at real competitions are normal.

The clean and jerk portion of the session is finally concluded. A new button appears.

Strt #	Athlete	Team	Age	Age Group	Wt. Cat.	Body Wt.	Next Wt.	Att #	Cl & Jk 1st	Cl & Jk 2nd	Cl & Jk 3rd	Best Snatch	Total
5	CHIGISHEV Evgeny	RUS	29	Sr.	+105	124.13			247	248	249	205	454
1	STEINER Matthias	GER	26	Sr.	+105	145.93			-246	-246	246	204	450
3	SCERBATIHS Viktors	LAT	34	Sr.	+105	144.97			242	243	-244	203	446
7	UDACHYN Artem	UKR	28	Sr.	+105	144.09			235	236	237	197	434
2	JEON Sang-Guen	KOR	27	Sr.	+105	155.49			-220	220	221	199	420
4	KLESZCZ Grzegorz	POL	31	Sr.	+105	131.16			232	-233	233	187	420
6	SHYMECHKO Ihor	UKR	22	Sr.	+105	130.25			217	218	219	195	414

A click of the “Awards” button produces the awards screen for the session.



Men / Sr. / +105

Snatch | Clean and Jerk | Total

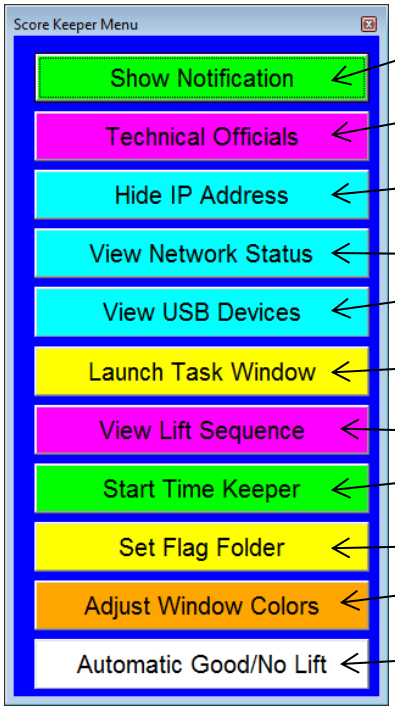
Lot No.	Athlete	Team	Birth Year	Age Grp.	Wt. Cat.	Snatch 1	Snatch 2	Snatch 3	Clean and Jerk 1	Clean and Jerk 2	Clean and Jerk 3	Total	Place sn	Place cj	Place T
201	CHIGISHEV Evgeny	RUS	1979	Sr.	+105 A	200	-205	205	247	248	249	454	1	1	1
51	STEINER Matthias	GER	1982	Sr.	+105 A	-198	198	204	-246	-246	246	450	2	2	2
170	SCERBATIHS Viktors	LAT	1974	Sr.	+105 A	198	203	-206	242	243	-244	446	3	3	3

By default, the placements are for the total. The “Snatch” button will change the display to that of the snatch competition placements and the “Clean and Jerk” button will change the display to that of the clean and jerk placements. This window is closed by clicking the red “X” at the top right of the window.

On the SKP screen there is also a menu button.

Clicking

will display the following window:



Discussed later in this section and in the MAR section.

Display/Edit list of technical officials (not yet implemented).

Hides (or shows) the SKP's IP address.

See what clients are attached to the SKP.

See what USB devices are attached and in use.

Display the menu to launch additional tasks.

View the lift sequence of current session.

Start the TMK task as a slave of the SKP.

Locate the folder with the national or team flags.

Adjust the colors of the various elements on the SKP display.

Enable or disable the SKP to accept referee decisions from the Referee Light System. Menu item will only be available if the RLS hardware is connected.

There are other menu options which will available if SKP is used in licensed mode.

If the Referee Light System is connected and the Automatic mode is selected the Good Lift and No Lift buttons will disappear and the Automatic Good / No Lift indicator (not a button) will appear.

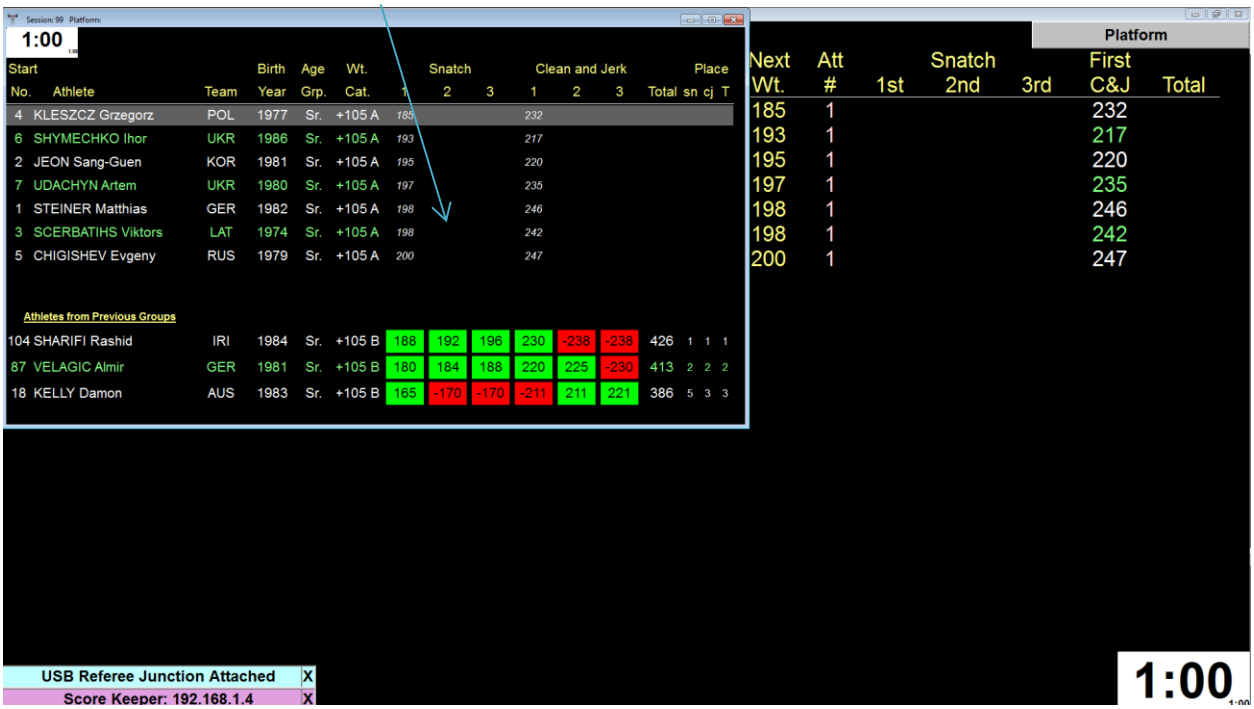
The Good Lift and No Lift buttons are available on the athlete card regardless.

When the RLS is connected the referee decision indicators will appear as each referee renders a decision.

Three (3) seconds following the last referee's decision the green background on the referee decision indicators will change to either red or white to reflect each decision.

If the operator selects Launch Task Window then the Task Select menu will replace existing menu. Each selection will launch the indicated slave task as an additional window on the SKP computer.

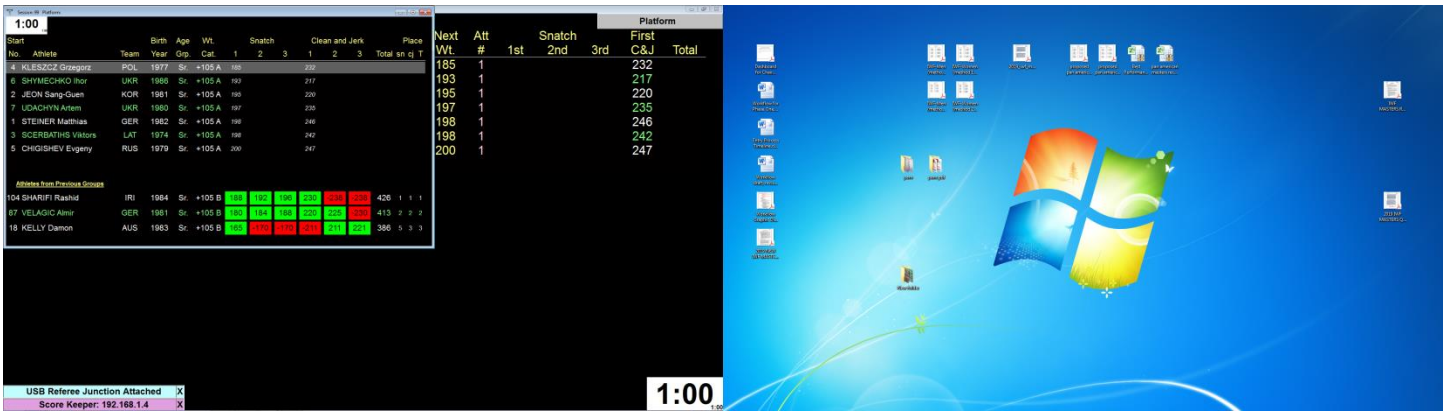
If the operator selects Launch Dynamic Score Board then the Dynamic Score Board window will appear on the screen.



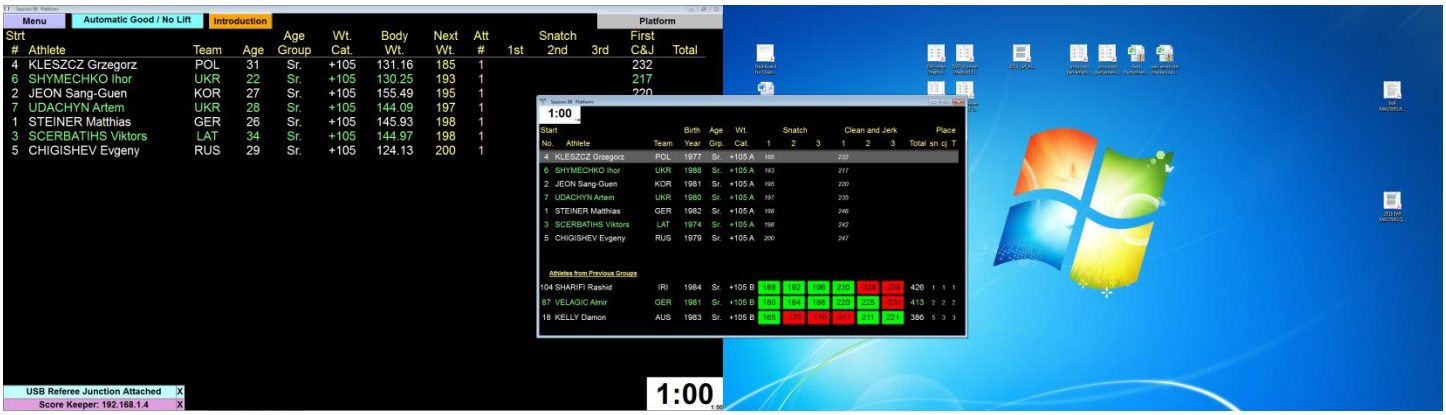
The Dynamic Score Board is discussed in a later section. To be useful as a secondary task on the SKP there must be an external monitor (or projector) attached to the SKP and the Windows "Multiple displays:" option must be set to "Extend these displays". The new Score Board window can be dragged onto the additional monitor and maximized there as seen in the following sequence of images.

NOTE: when using multiple monitors with the "Extend these displays" option the mouse cursor can be inadvertently moved onto a window other than the SKP window. If the mouse cursor disappears then it is probably hiding on the other monitor.

Dual monitor view:



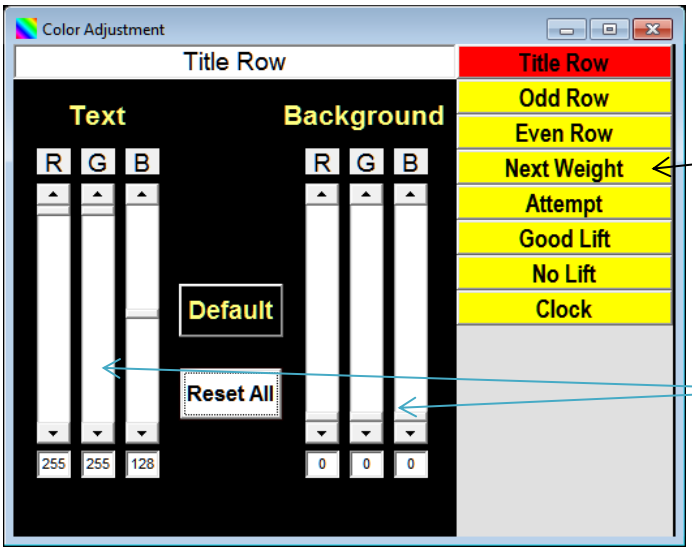
Drag the Dynamic Score Board to the external monitor.



Expand the Dynamic Score Board to the extent of the screen.

Click

on the menu to change the colors of the window.

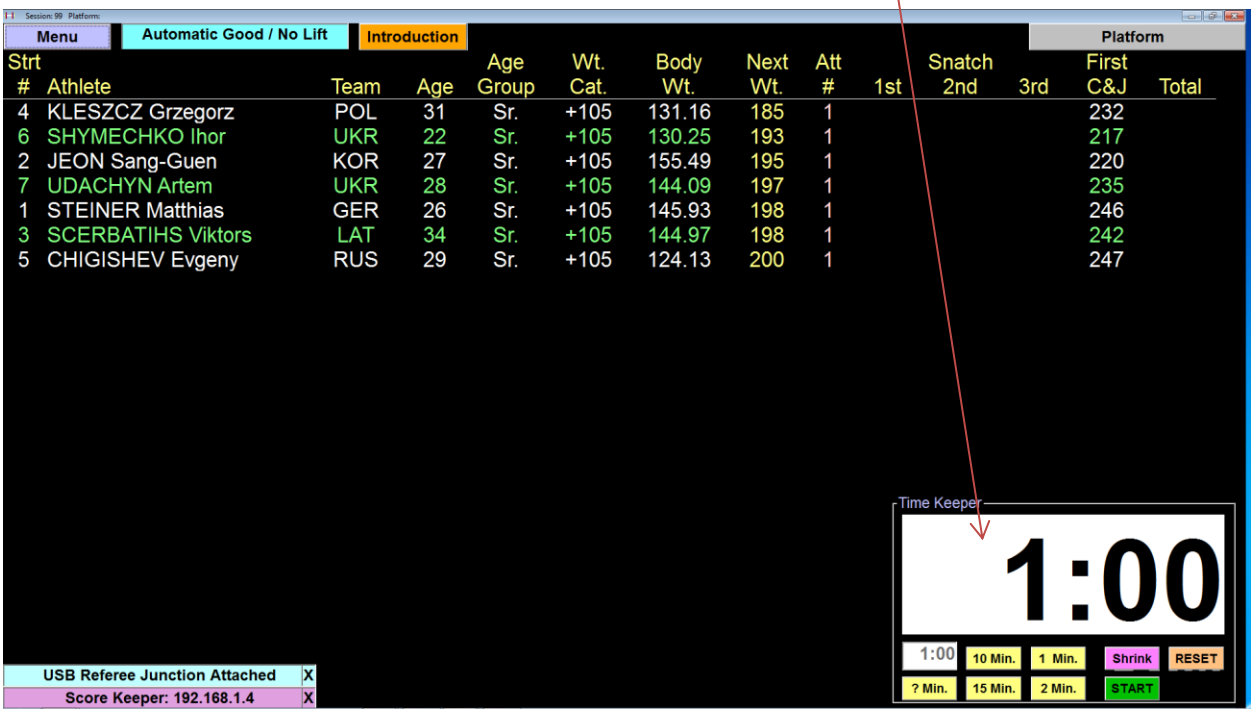


Adjust the slide bars to change the color of the text or background of the item in the list on the right.

For the non-geeks among us R, G, and B stand for Red, Green, and Blue respectively.

Slide bars.

Click Start Time Keeper to start the TMK (Time Keeper) task. The initial TMK window is embedded in the lower right corner of the SKP window. Note: If the RLS Time Keeper Console is plugged in to a USB port on the computer the Time Keeper will automatically start.

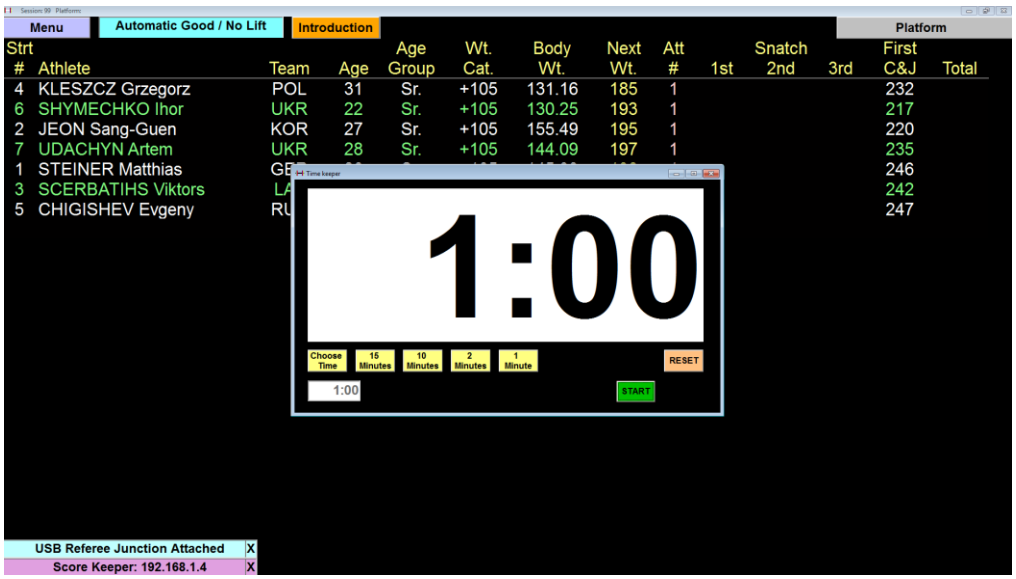


Notice that the clock display previously seen on the SKP window disappeared. It is superfluous when the embedded TMK window is used. Time Keeper buttons and usage are discussed in the TMK section. Click Menu again and you will see that Start Time Keeping has been replaced with other options.

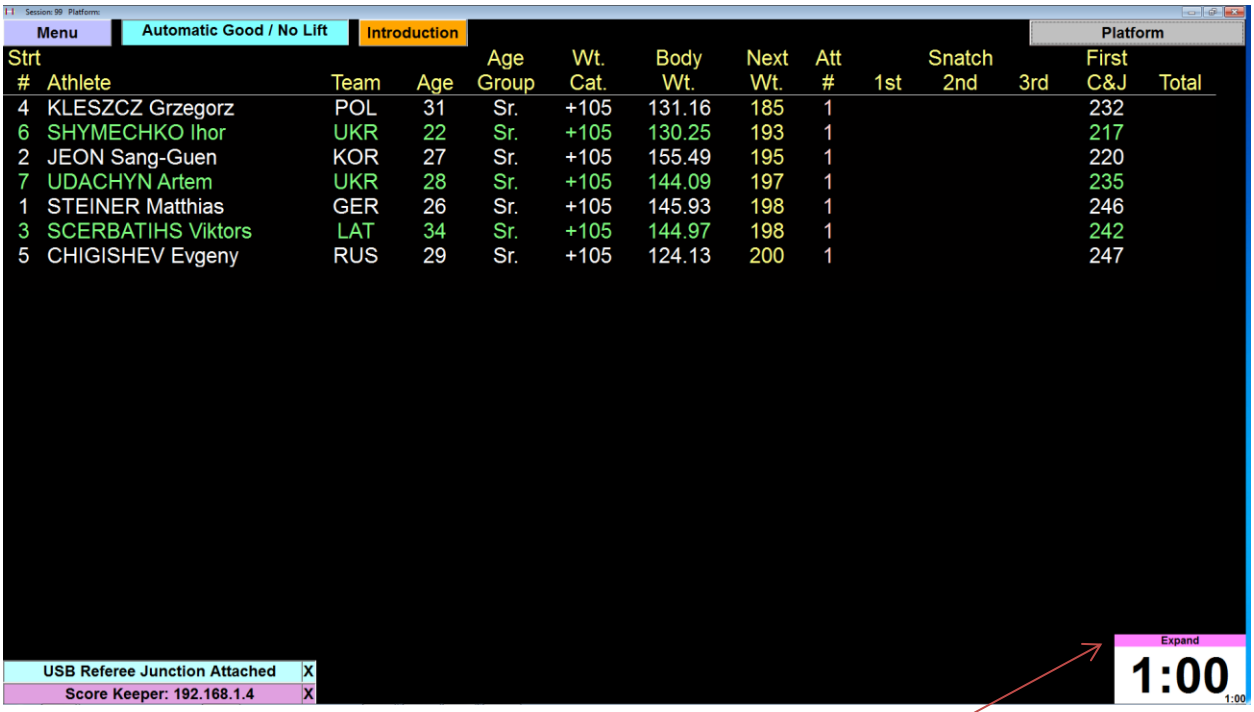
Stop Time Keeper — Stop the Time Keeper task.

Detach TMK window — Detach the embedded TMK from the SKP

Detaching the TMK will split it off into another window. The new window may be moved to a second monitor in the same manner as we saw with the Dynamic Score Board window.



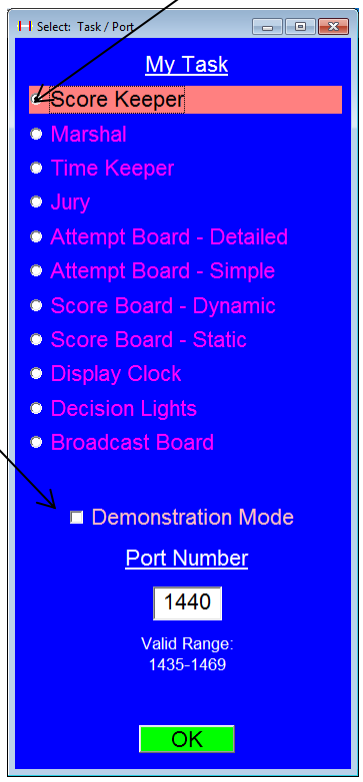
Click the “X” in the upper right of the TMK window to restore the TMK to the embedded position. While the TMK is embedded click the Shrink button to shrink the TMK display.



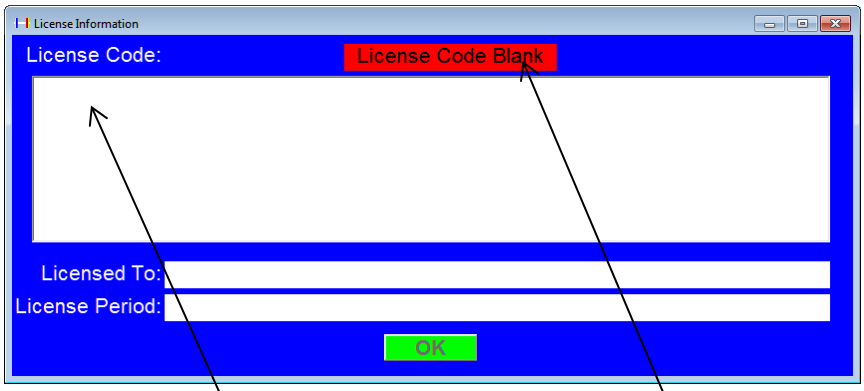
This allows the speaker to see the results from the bottom right area of the screen that is normally covered up by the embedded TMK. To restore the TMK to normal size click the Expand button.

<u>Score Keeper</u> (licensed mode)

Uncheck the “Demonstration Mode” Box and select ‘Score Keeper’, and Click OK.

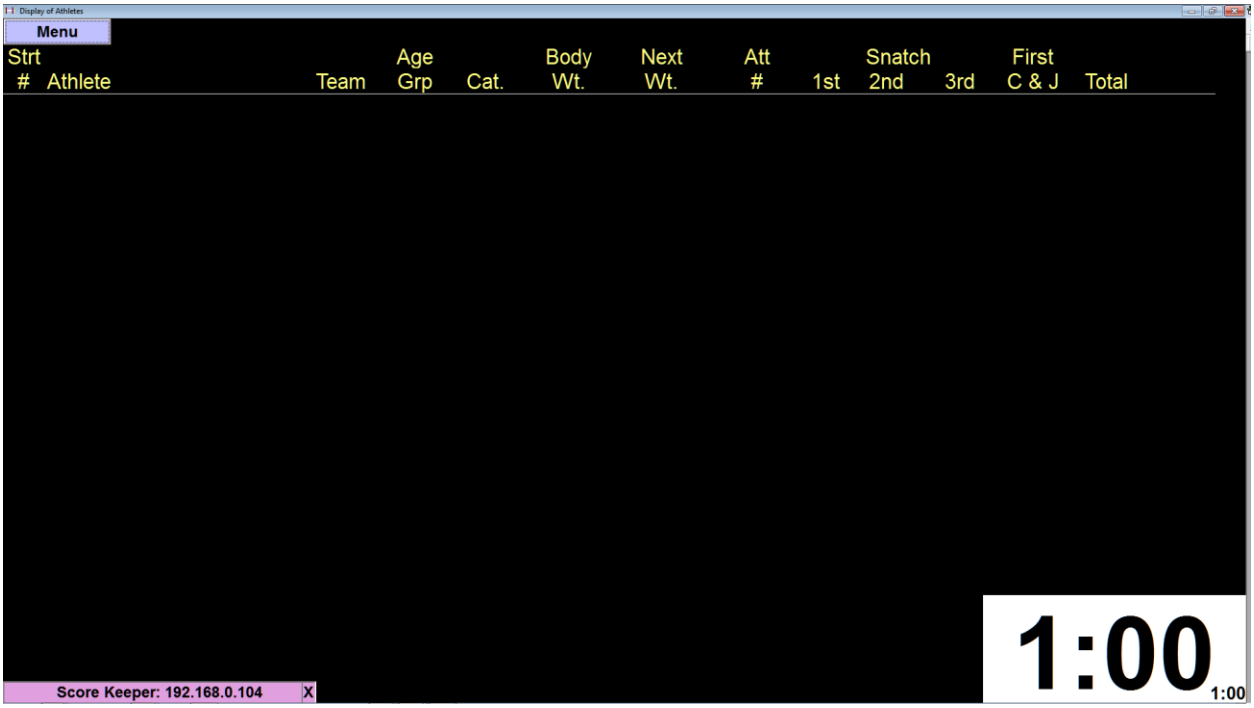


The task selection window disappears and is replaced by the license window.

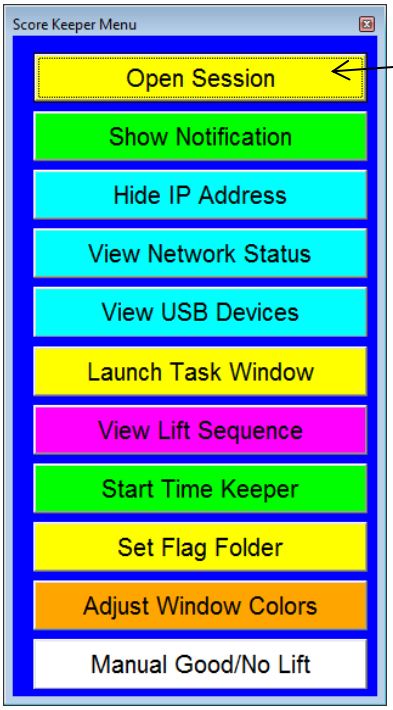


If a license code is typed into the license code area (preferably via cut and paste) it will be instantly evaluated. It may be invalid, expired, not yet valid, or valid as will be shown in the message area. If the license is valid the OK button will be enabled. Click it to proceed to the SKP window.

The initial SKP window will have no session data.

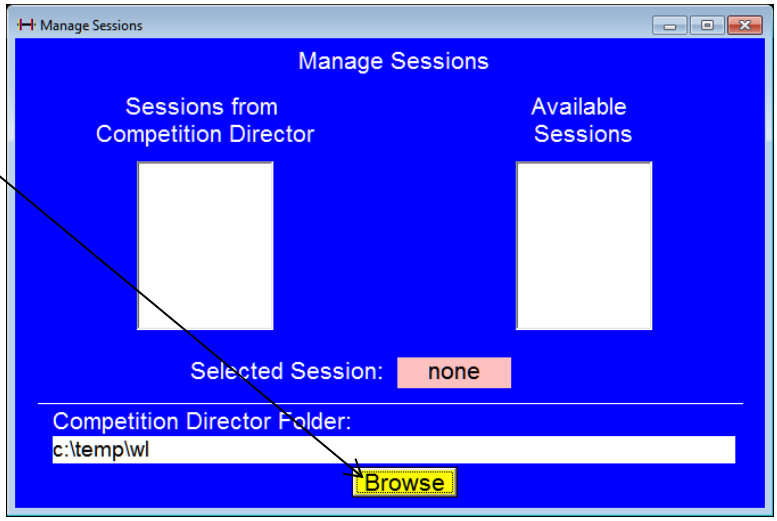


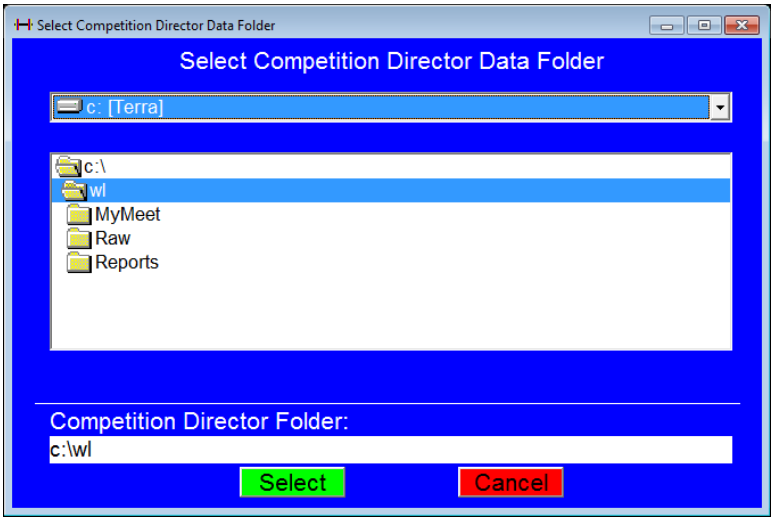
Click Menu to display the menu. In the licensed mode there will be an extra option.

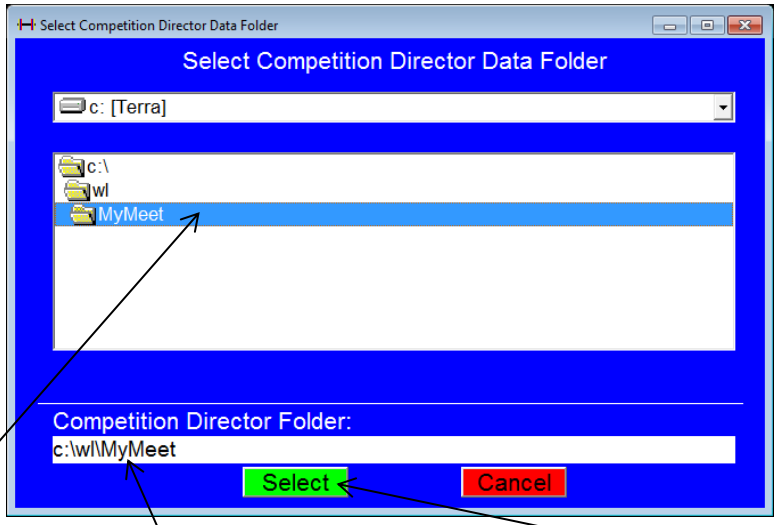


Allows operator to select and open a session.
Only available when operating in licensed mode.
Click this to open the Manage Sessions window.

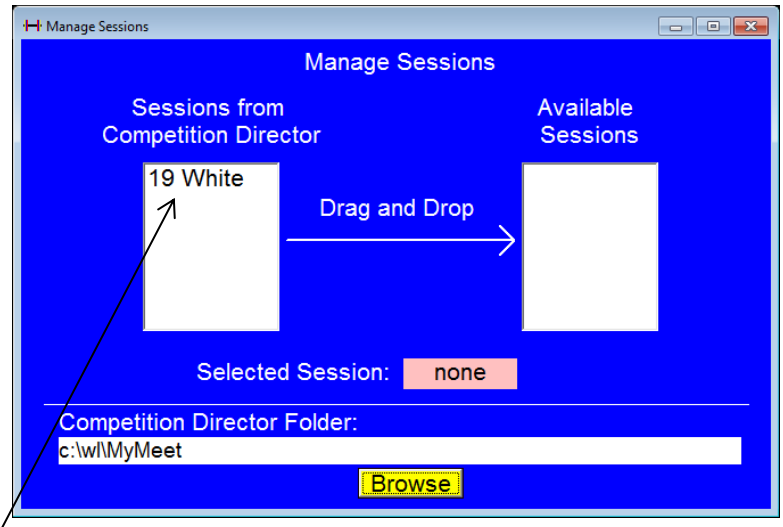
The "Manage Session" window allows the operator to import and export the session data from and to an external location such as a source shared folder or USB memory stick. The operator selects the folder using the Browse button.





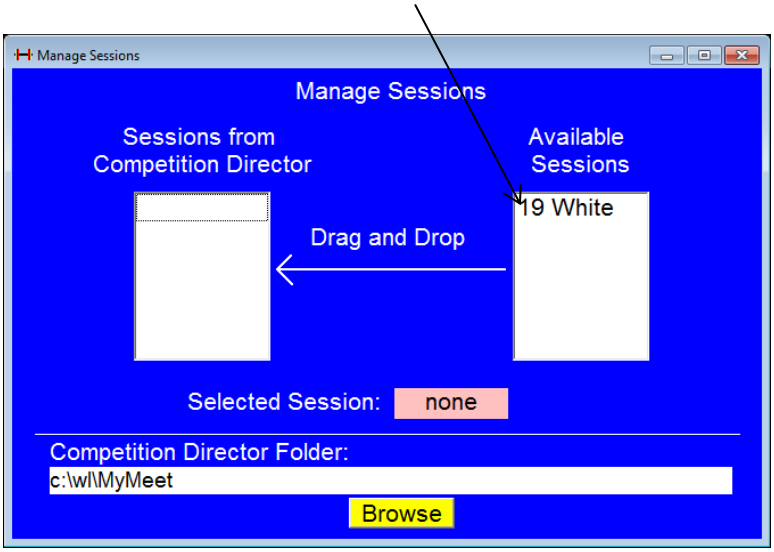


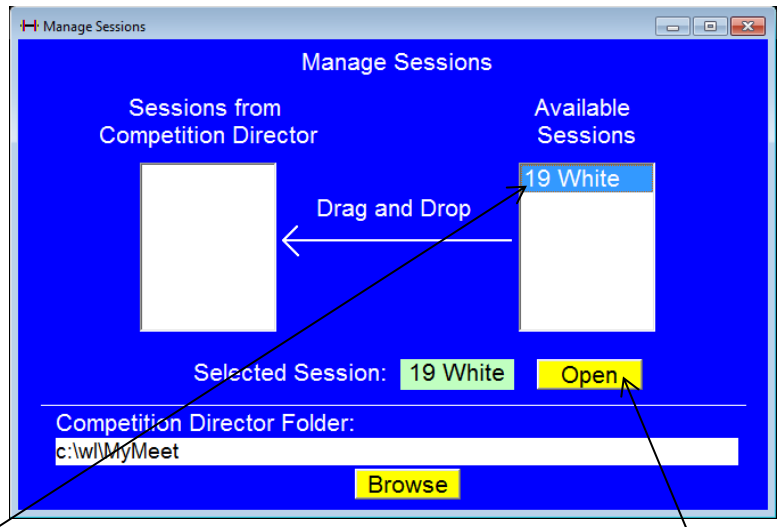
The operator browses to the desired folder, double clicks the folder, and then selects the folder.



Notice that there is a session available in the selected location (provided by the Competition director).

The operator drags the desired session(s) to the Available Sessions area.

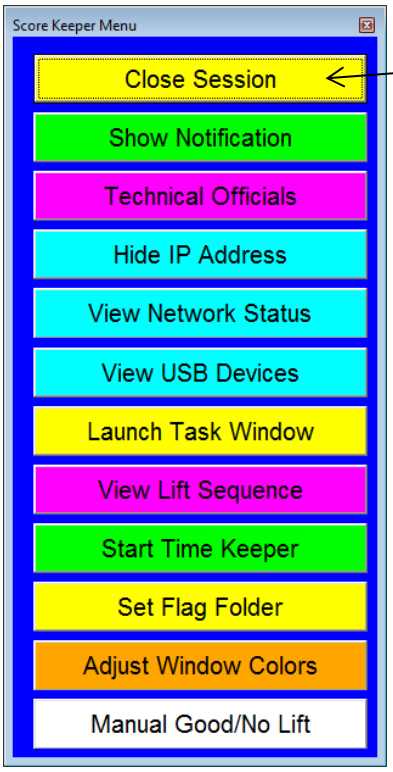




The operator then clicks the session in the available sessions area (in this case 19 white) and clicks “Open”. The data for session 19 / platform white is now the current session. From this point until the session is complete the operation in licensed mode is identical to the operation in demo mode.

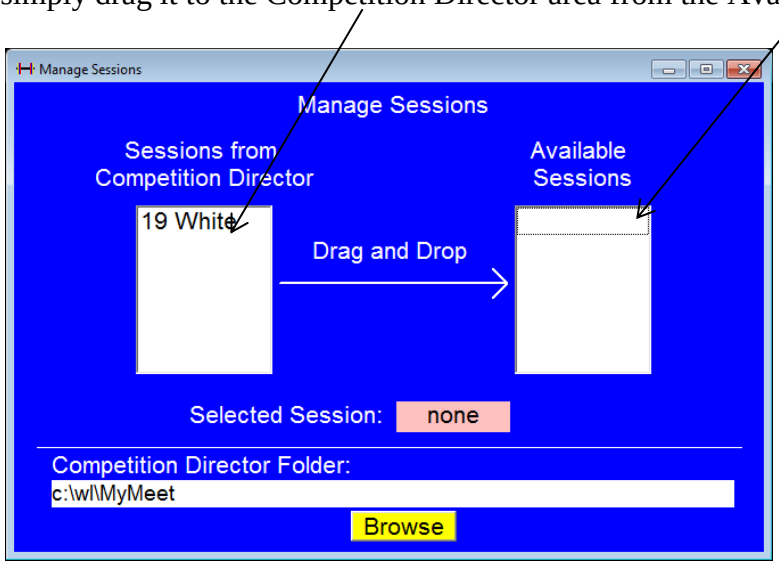
Strt #	Athlete	Team	Age	Age Group	Wt. Cat.	Body Wt.	Next Wt.	Att #	Snatch 1st	Snatch 2nd	Snatch 3rd	First C&J	Total
12	RIGSBY Seán	IRL	31	Sr.	109	120.56	125	1					
6	RIEDEL Mark	DAYTO	23	Sr.	109	161.70	130	1					
8	BRIBIESCA Marcos	LINDEN	19	Sr.	109	135.90	130	1				170	
10	SHIRONAKA Nickolas	OKLAHO	23	Sr.	109	141.79	135	1					
11	FLORES Cesar	SAGESG	22	Sr.	109	145.59	135	1					
2	EVERETT Quinn	CAN	27	Sr.	109	148.22	140	1					
9	JORGE David	COLLE	25	Sr.	109	121.29	150	1					
1	NONAKA Masahiro	JPN	23	Sr.	109	148.13	165	1					
7	WILKES Caine Morgan	USA	32	Sr.	109	146.45	165	1					
3	WITTE Keiser Andrew	USA	24	Sr.	109	141.80	170	1				200	
4	KITTS Wesley Brian	USA	29	Sr.	109	112.96	170	1				200	
5	CHINEN Kosuke	JPN	23	Sr.	109	143.62	170	1					

Click Menu now and you will notice a slight difference.



The Open Session is now Close Session.
Click this to close the session.

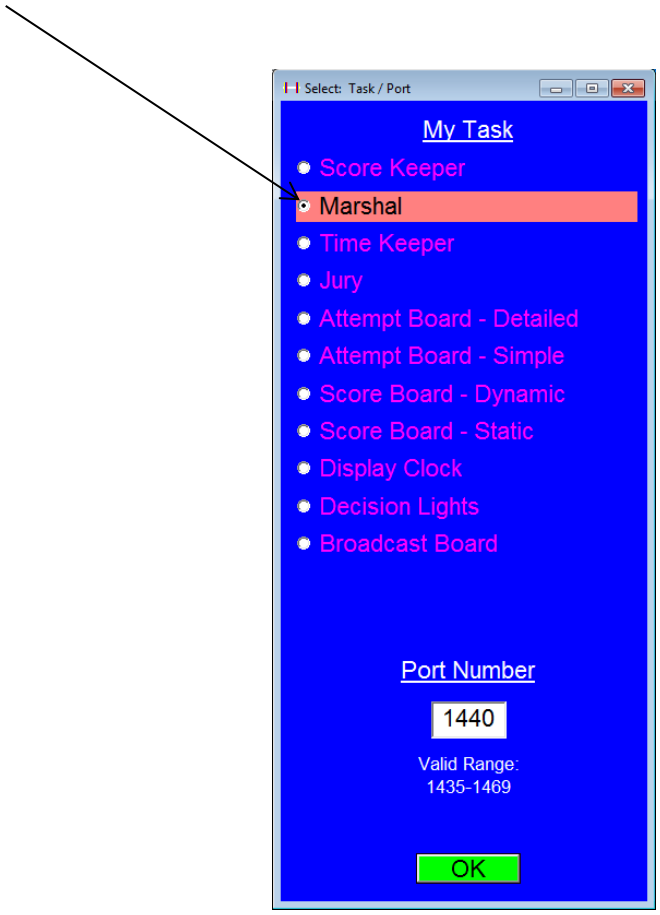
If the session is complete simply drag it to the Competition Director area from the Available Sessions area.



If the shared folder of the Competition Director was set up properly the session data may be imported to the Competition Director. This could be via a USB drive, a local folder, or a network folder.

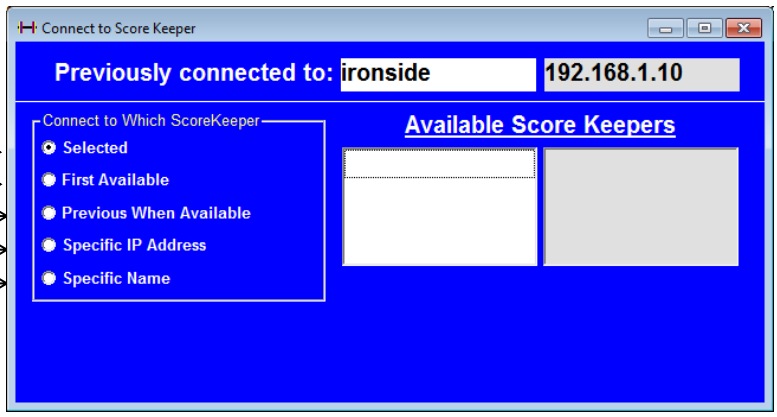
Marshal

Check Select ‘Marshal’, and Click ‘OK’.



This opens the “Connect to Score Keeper” window. This lists all of the SKP computers on the network. It may require a few seconds for the “Available Score Keepers” list to populate.

Connect to selected SKP
Connect to first available SKP
Connect to previously connected SKP
Specify a specific SKP by IP address
Specify a specific SKP by name

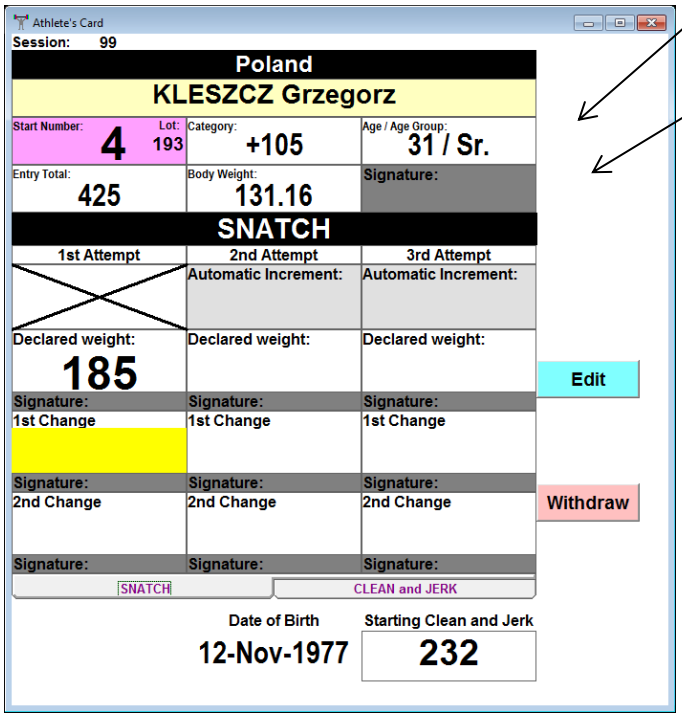


When selecting either of the “Specify” options a field in which to enter the name or IP address of the SKP becomes visible. When a valid IP address (or host name) is entered in this field an “Accept” button will appear.

Once the connection is established the SKP downloads the current session data to MAR.

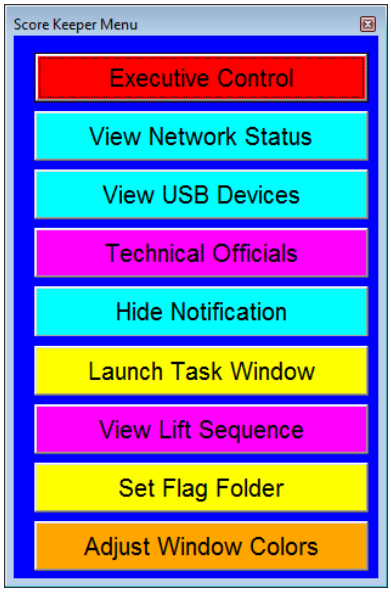
Strt #	Athlete	Team	Age	Age Group	Wt. Cat.	Body Wt.	Next Wt.	Att #	Snatch 1st	Snatch 2nd	Snatch 3rd	First C&J	Total
4	KLESZCZ Grzegorz	POL	31	Sr.	+105	131.16	185	1				232	
6	SHYMECHKO Ihor	UKR	22	Sr.	+105	130.25	193	1				217	
2	JEON Sang-Guen	KOR	27	Sr.	+105	155.49	195	1				220	
7	UDACHYN Artem	UKR	28	Sr.	+105	144.09	197	1				235	
1	STEINER Matthias	GER	26	Sr.	+105	145.93	198	1				246	
3	SCERBATIHS Viktors	LAT	34	Sr.	+105	144.97	198	1				242	
5	CHIGISHEV Evgeny	RUS	29	Sr.	+105	124.13	200	1				247	

The operator clicks on the athlete to display the athlete card. Note the absence of the “Good Lift” and “No Lift” buttons. Those are the sole responsibility of the SKP.



The Marshal’s responsibility is to enter the declarations and changes requested by the athlete/coach and to withdraw an athlete. These responsibilities automatically revert to the SKP if there is no MAR. When MAR is in use the SKP is unable to enter declarations and changes and cannot withdraw an athlete.

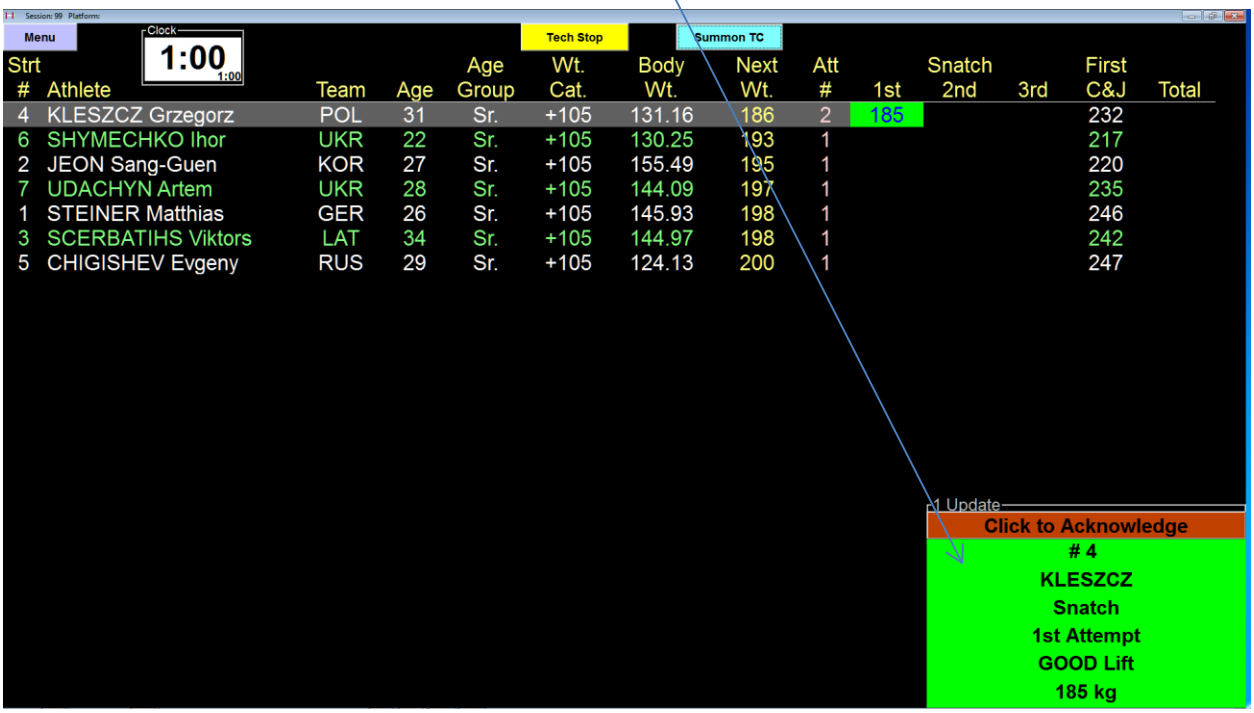
Notice that the menu is similar, but slightly different from that of the SKP. Most menu selections perform exactly the same as on the SKP.



The "Executive Control" button should only be used to correct major problems that involve both changing lift results and declaration or change values. When in Executive Control mode the SKP loses the ability to enter the attempt decisions and a large red "Marshal has Executive Control" message is displayed in the competition message area in the middle of the SKP screen. When the Marshal has made the necessary corrections he/she exits executive control mode by clicking the Relinquish button.

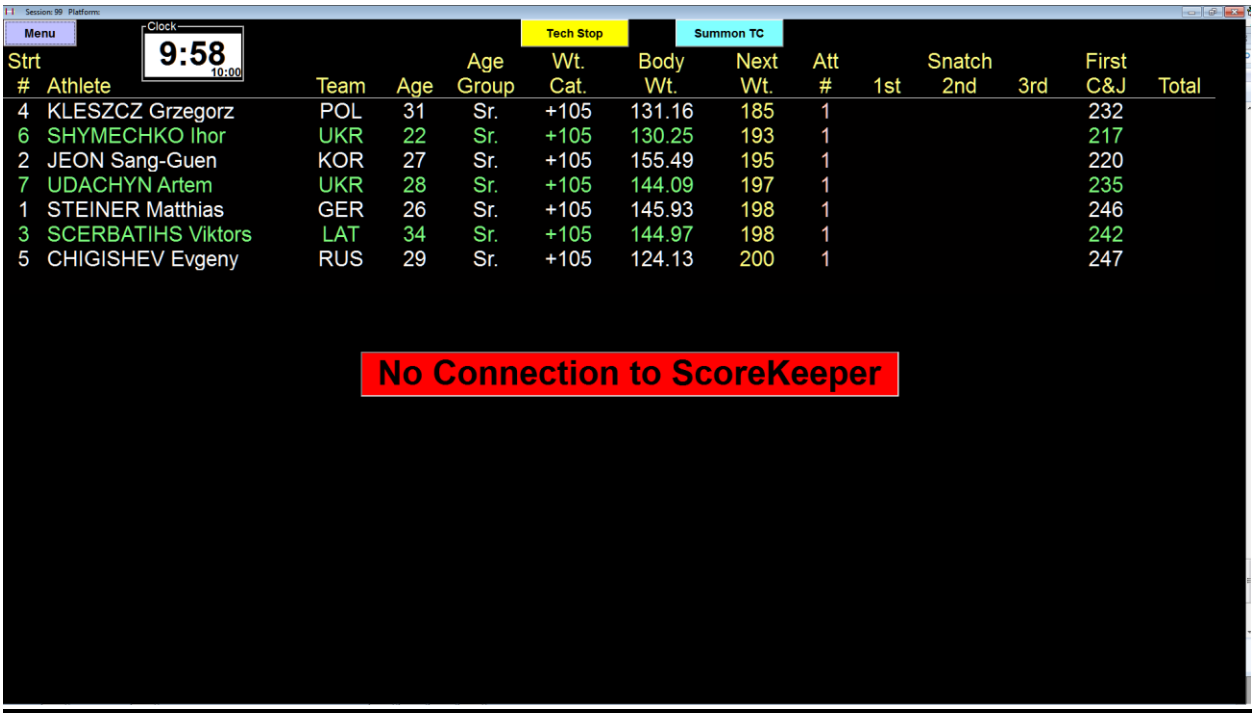
The Tech Stop button allows the Marshal to pause the competition. It stops the clock and causes a large message to be displayed in the competition message area in the middle of the SKP screen and all other client screens. Similarly the Summon TC button causes a large message to be displayed in the same manner, but it does not stop the clock.

When a decision is rendered on an attempt the MAR is notified.



The Marshal may click "Acknowledge" to remove the message, leave the message in view, or disable the notification altogether by a click of the Hide Notification in the menu.

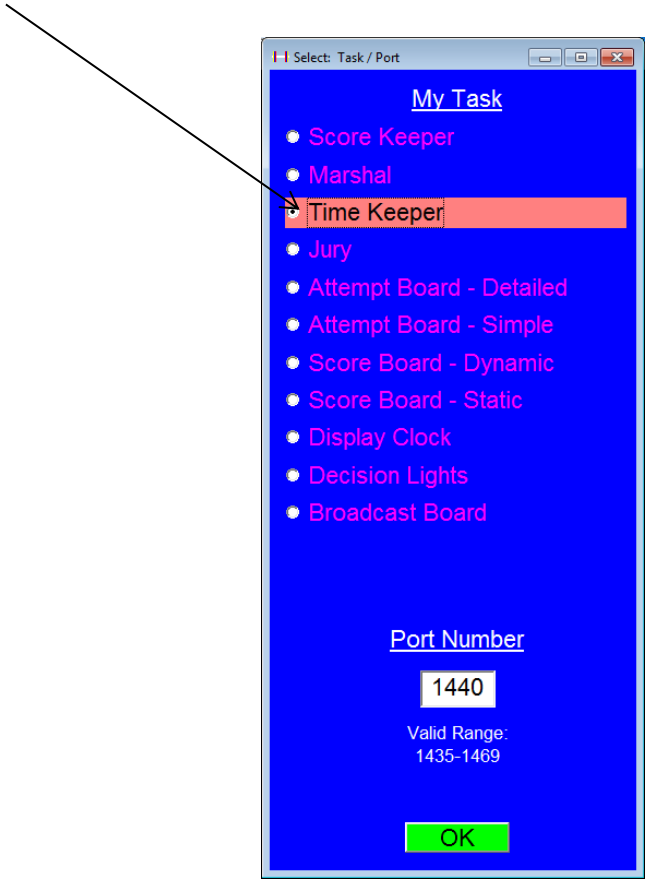
If for any reason the network connection to SKP is lost, MAR will alert the operator. Marshals will be unable to enter any declarations or changes or even view an athlete card. Once communication with SKP is reestablished all MAR functionality will return.



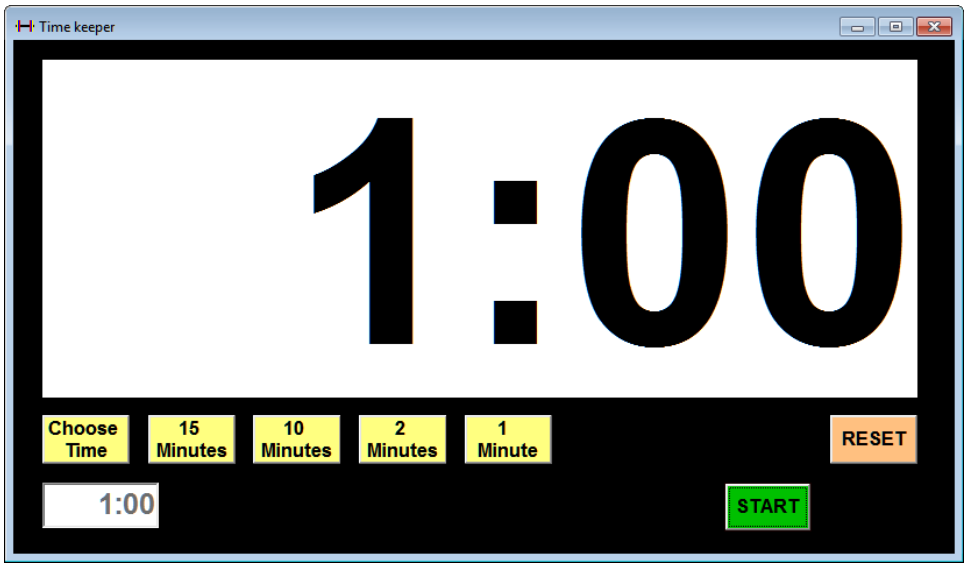
If the SKP shuts down normally a different message is displayed on the Marshal's screen.

Time Keeper

Check Select 'Time Keeper', and Click 'OK'.

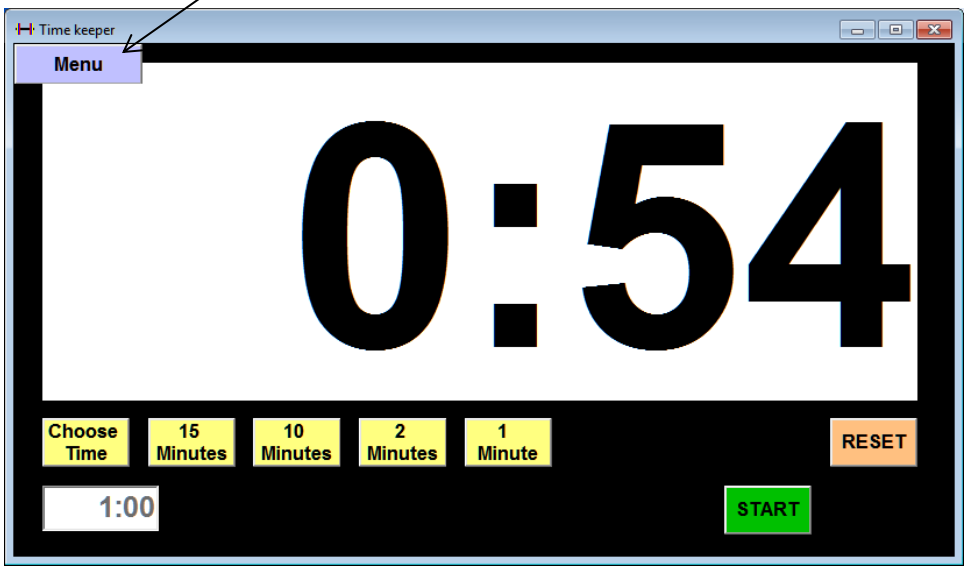


Connection to the SKP is attained with the “Connect to Score Keeper” window just as is done with MAR.



The operation of TMK is fairly self-evident. There are buttons to set specific times and any time up to 59:59 may be set by use of the “Choose Time” button. When active (counting down) the only button visible is “Stop”.

There is no visible Menu button. However, moving the mouse cursor to the upper left of the window (inside window border) will cause the Menu button to appear.

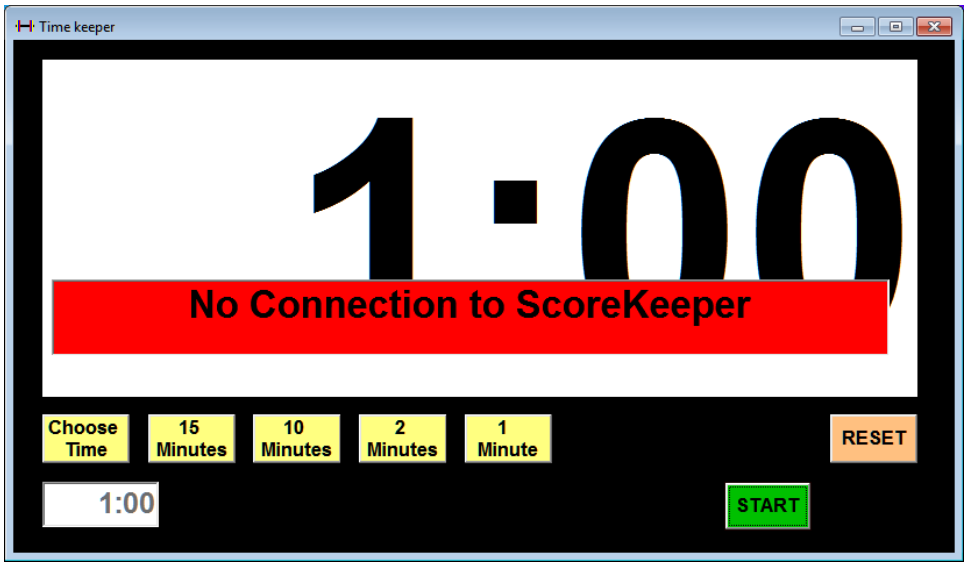


There are four (4) modes for the Time keeper.

Not in use:	TMK is not being used. The meet is not using a clock.
TMK on client:	TMK is a client computer.
TMK on SKP:	TMK is on SKP. Clock is being kept by Score Keeper.
SKP overriding TMK:	TMK is controlled on SKP, but a client is running TMK passively.

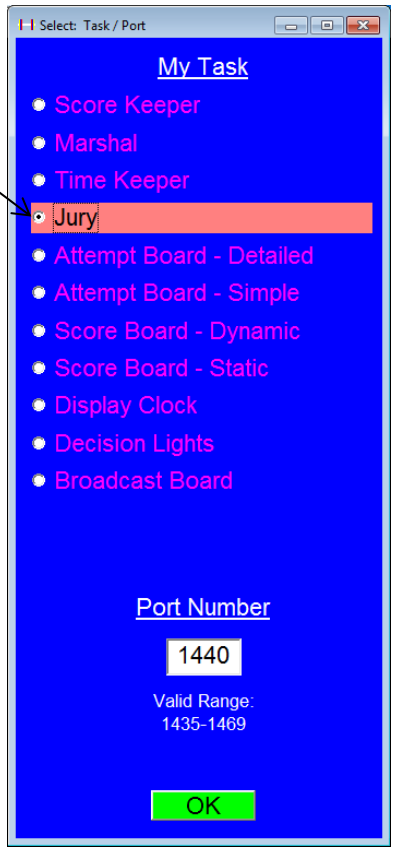
If the TMK is a client computer, the SKP menu will have the additional option “Usurp Time Keeper”. This allows SKP to take over the role of Time Keeper. The TMK on the client will continue to display the time in a passive mode. The SKP will then have the menu option of “Cede Time Keeper” which will return control to the client TMK.

If for any reason the network connection to SKP is lost, TMK will alert the operator. TMK will continue to function normally, but the correct time will not be propagated to SKP or any other client computers. Once communication with SKP is reestablished all displays will once again show the correct time.



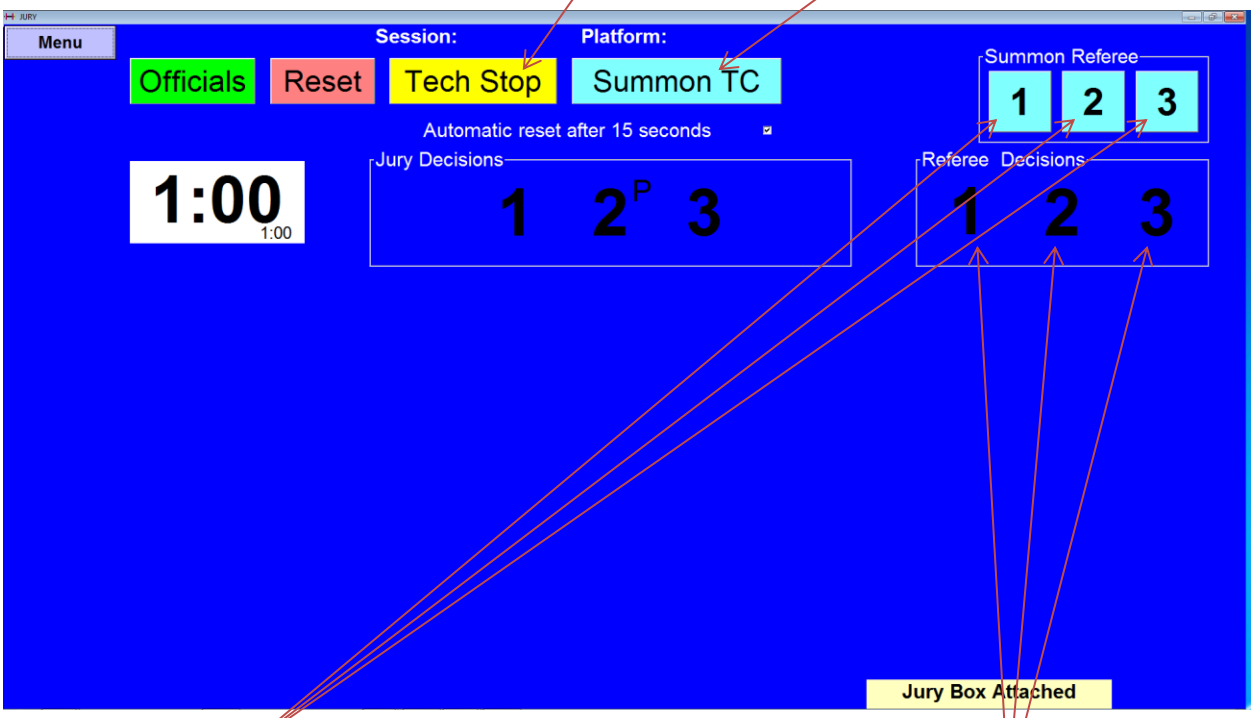
Jury

Check Select 'Jury', and Click 'OK'.



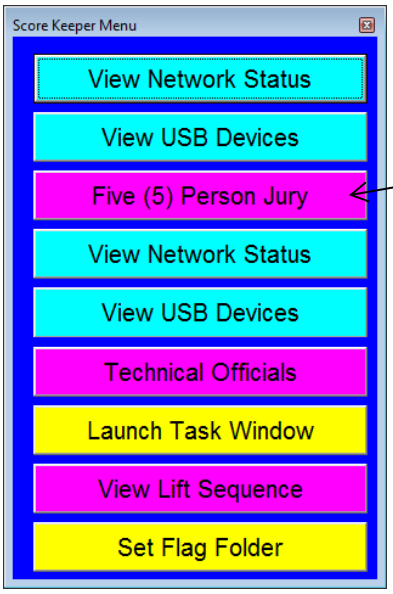
The Jury is connected to SKP in exactly the same manner as is the Marshal.

Once connected to SKP the jury screen appears. The Tech Stop and Summon TC buttons function in the same manner as on the Marshal.



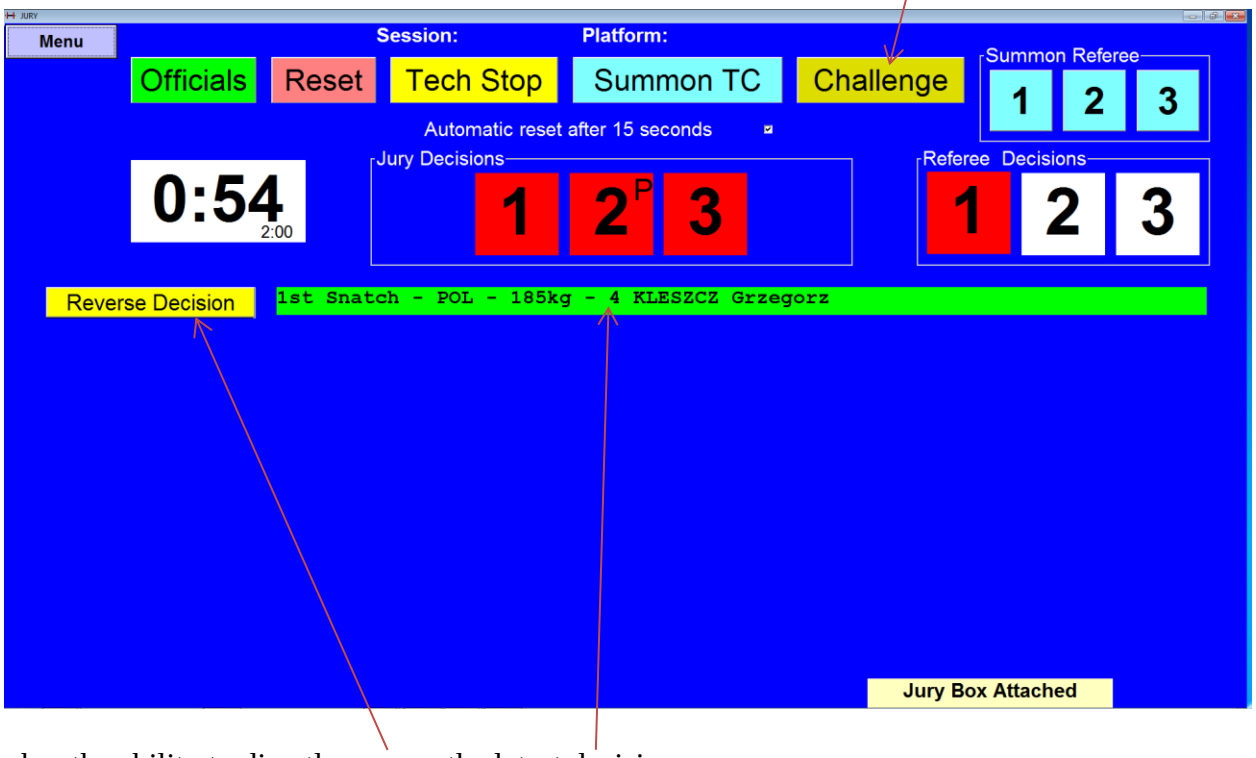
The Summon Referee Buttons cause the respective referee decision box to buzz. This alerts the referee that he/she is to immediately report to the jury. Each of the three (3) Referee Decision indicators will change to red or white immediately upon the respective referee rendering a decision. The Jury Decision indicators will change to green immediately upon the respective jury member rendering a decision. When the last jurist renders a decision all of the indicators will change to either red or white depending on the respective jurist's decision. The "Jury Box Attached" message at the bottom right of the screen will only appear if the Jury Junction Box is plugged into one of the USB ports on the computer. Without the Jury Junction Box there is no good reason to even launch the Jury task.

The menu is a similar that of MAR or SKP with one important difference.



Determines whether the jury is composed of 5 or 3 members.

After the competition begins the screen has a few more items on it. The Challenge button works the same as on the SKP.



The jury has the ability to directly reverse the latest decision.

Other Clients

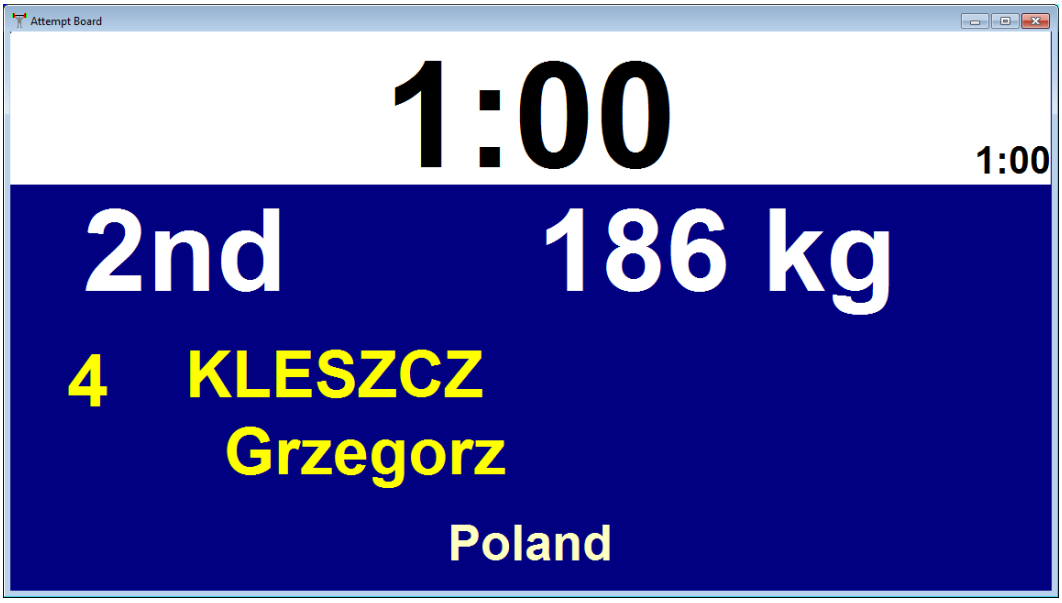
Attempt Board – detailed
Attempt Board – simple
Score Board – dynamic
Score Board – static
Display Clock
Decision Lights

These clients are started in the same manner as MAR and JUR. Each has a disappearing menu similar to that of TMK. After initial adjustment there is no operator interaction required for any of these tasks. They are merely displays.

Attempt Board - detailed

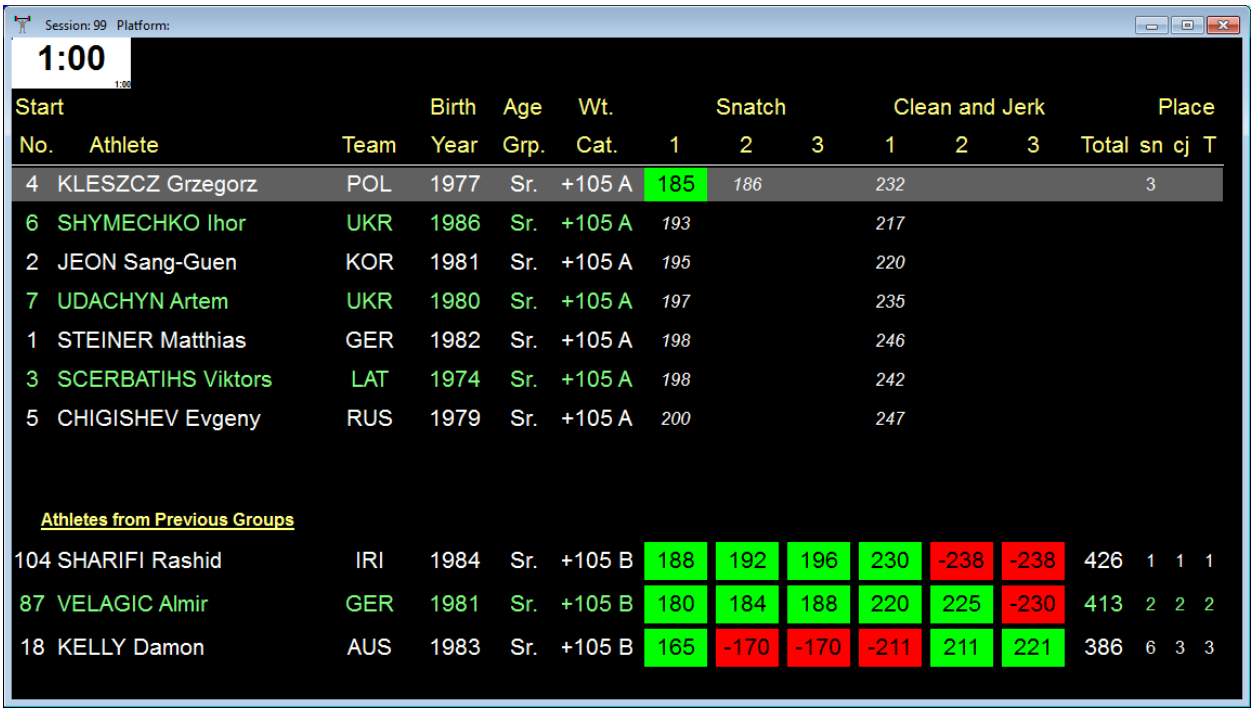
When the Referee Light System hardware is connected to SKP or any of the client computers the referees' decision will be briefly displayed.

Attempt Board - simple

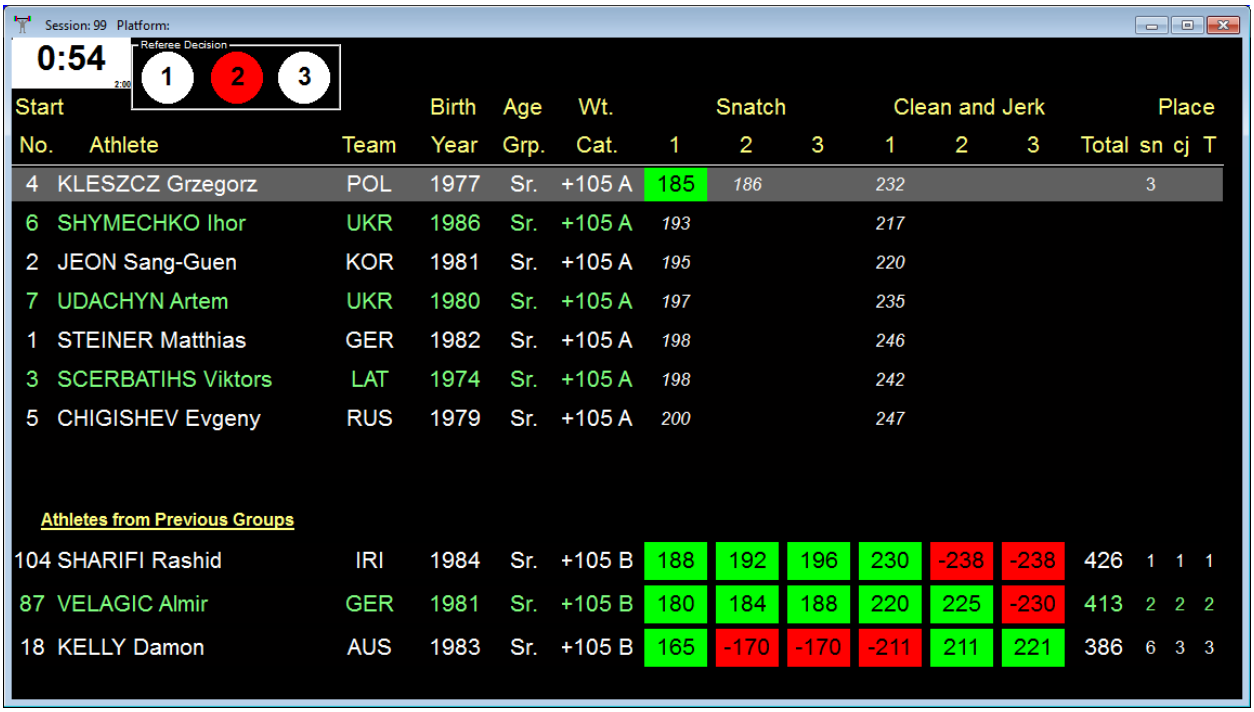


When the Referee Light System hardware is connected to SKP or any of the client computers the referees' decision will be briefly displayed.

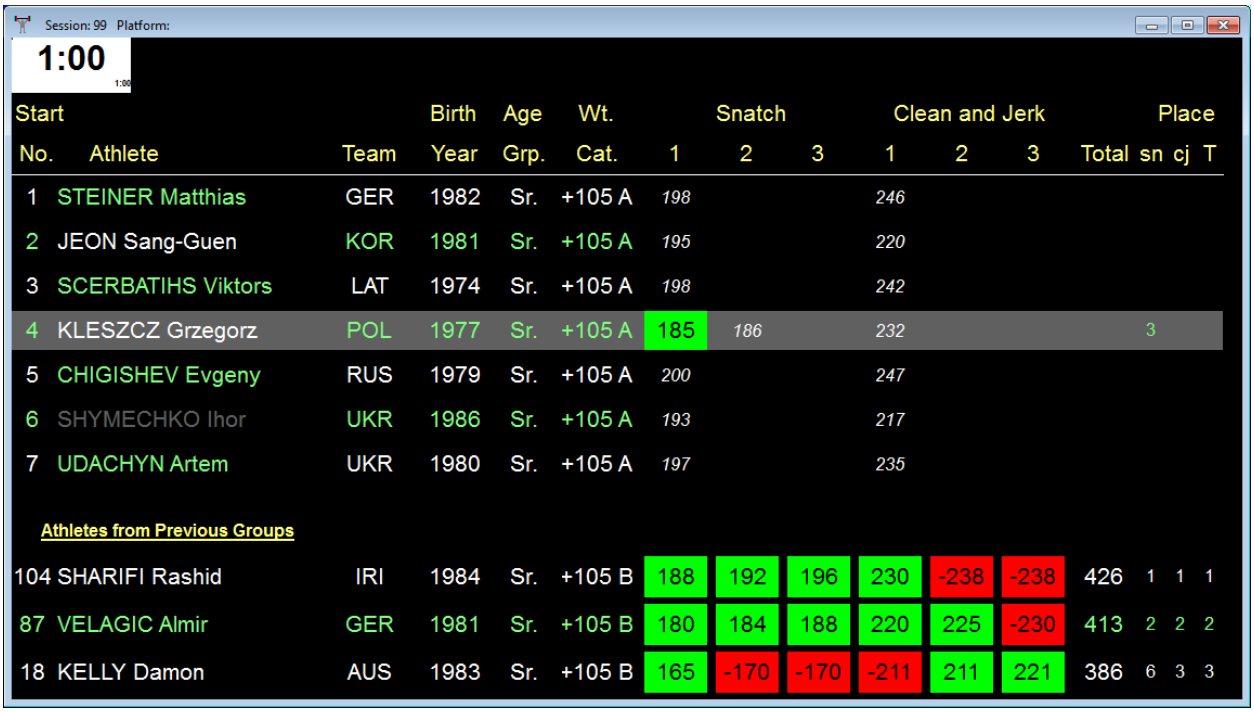
Score Board - dynamic



When the Referee Light System hardware is connected to SKP or any of the client computers the referees' decision will be briefly displayed.

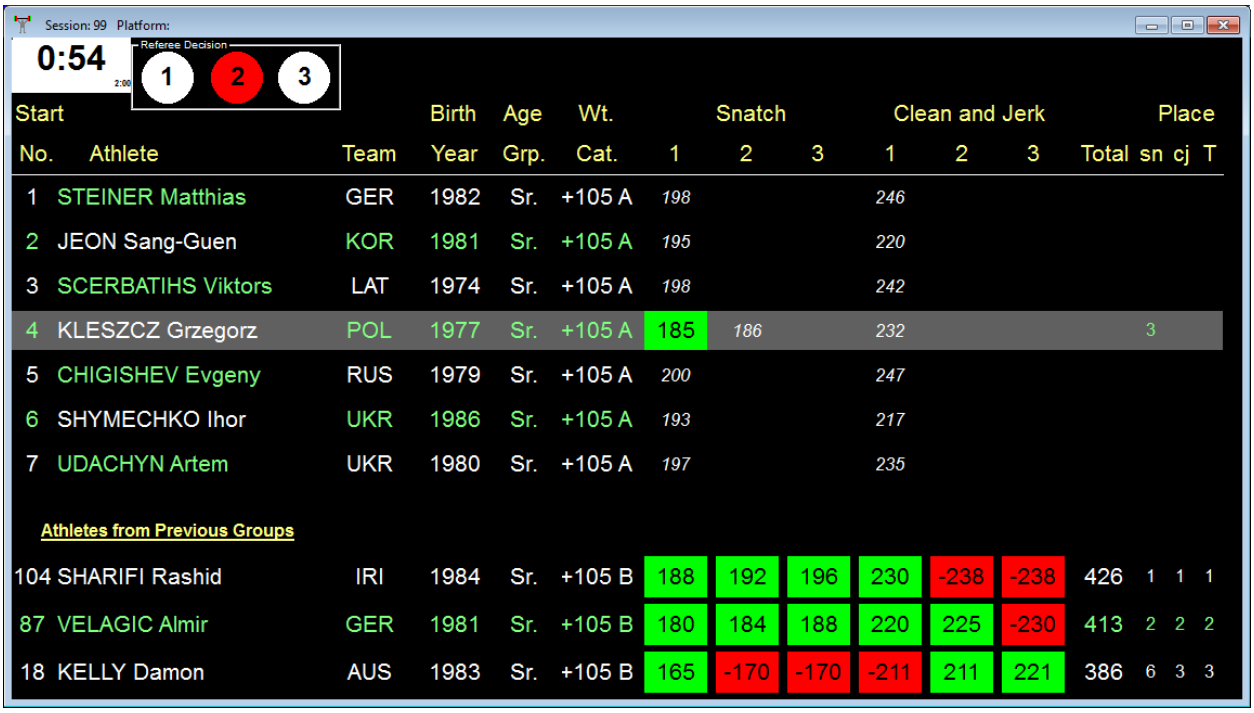


Score Board - static



Start No.	Athlete	Team	Birth Year	Age Grp.	Wt. Cat.	Snatch 1	Snatch 2	Snatch 3	Clean and Jerk 1	Clean and Jerk 2	Clean and Jerk 3	Total	Place sn	Place cj	Place T
1	STEINER Matthias	GER	1982	Sr.	+105 A	198			246						
2	JEON Sang-Guen	KOR	1981	Sr.	+105 A	195			220						
3	SCERBATIHS Viktors	LAT	1974	Sr.	+105 A	198			242						
4	KLESZCZ Grzegorz	POL	1977	Sr.	+105 A	185	186		232					3	
5	CHIGISHEV Evgeny	RUS	1979	Sr.	+105 A	200			247						
6	SHYMECHKO Ihor	UKR	1986	Sr.	+105 A	193			217						
7	UDACHYN Artem	UKR	1980	Sr.	+105 A	197			235						
Athletes from Previous Groups															
104	SHARIFI Rashid	IRI	1984	Sr.	+105 B	188	192	196	230	-238	-238	426	1	1	1
87	VELAGIC Almir	GER	1981	Sr.	+105 B	180	184	188	220	225	-230	413	2	2	2
18	KELLY Damon	AUS	1983	Sr.	+105 B	165	-170	-170	-211	211	221	386	6	3	3

When the Referee Light System hardware is connected to SKP or any of the client computers the referees' decision will be briefly displayed.



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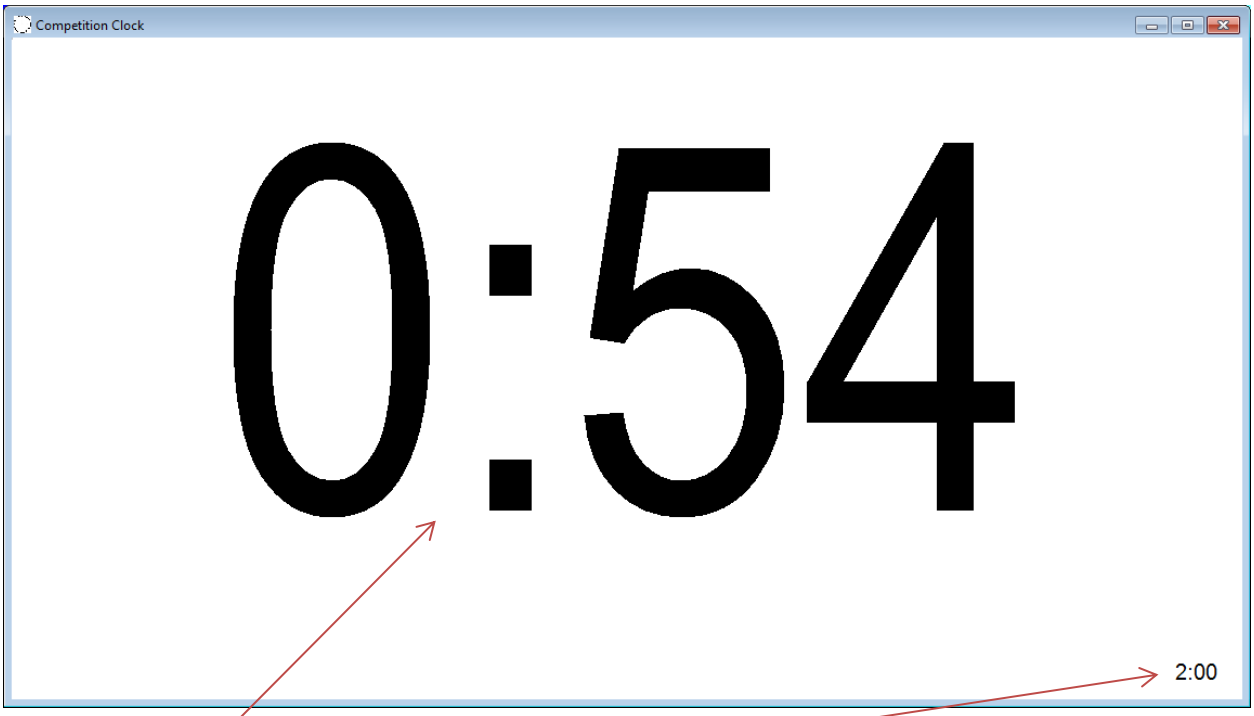
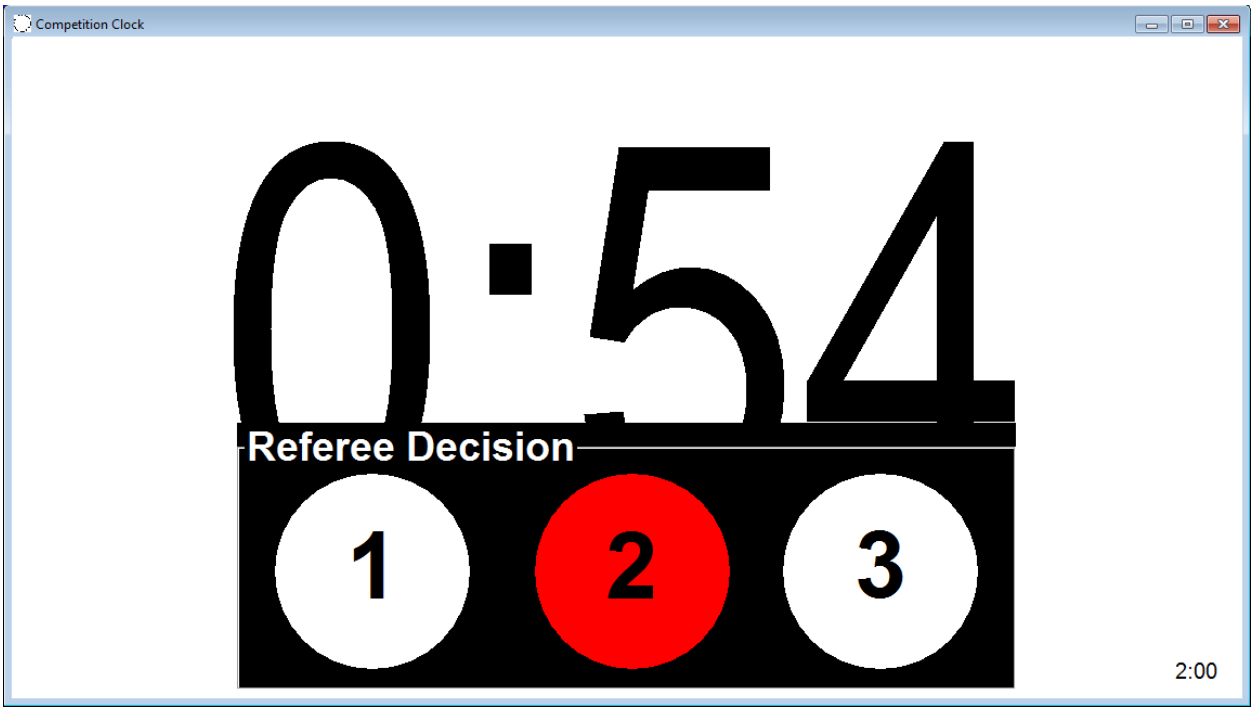
18	KELLY Damon	AUS	1983	Sr.	+105 B	165	-170	-170	-211	211	221	386	6	3	3

Display Clock

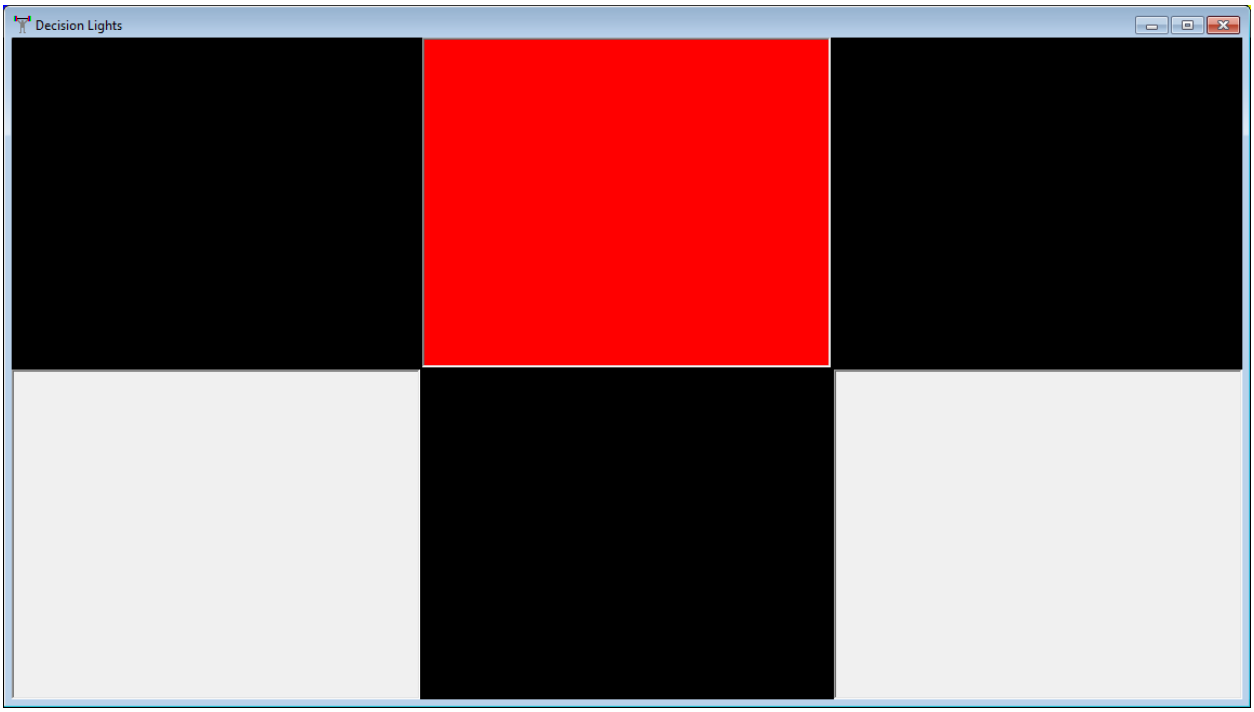


In addition to the time remaining on the clock, the initial clock value is shown. In this case the 2 minute clock has counted down to 54 seconds remaining.

When the Referee Light System hardware is connected to SKP or any of the client computers the referees' decision will be briefly displayed.



Decision Lights



The Decision Lights is normally a black screen. In this case the center rendered a “no lift” decision and the side referees both rendered a “Good Lift” decision. The decisions appear 3 seconds after the last referee makes a decision. The red or white decisions remain for about 7 seconds.