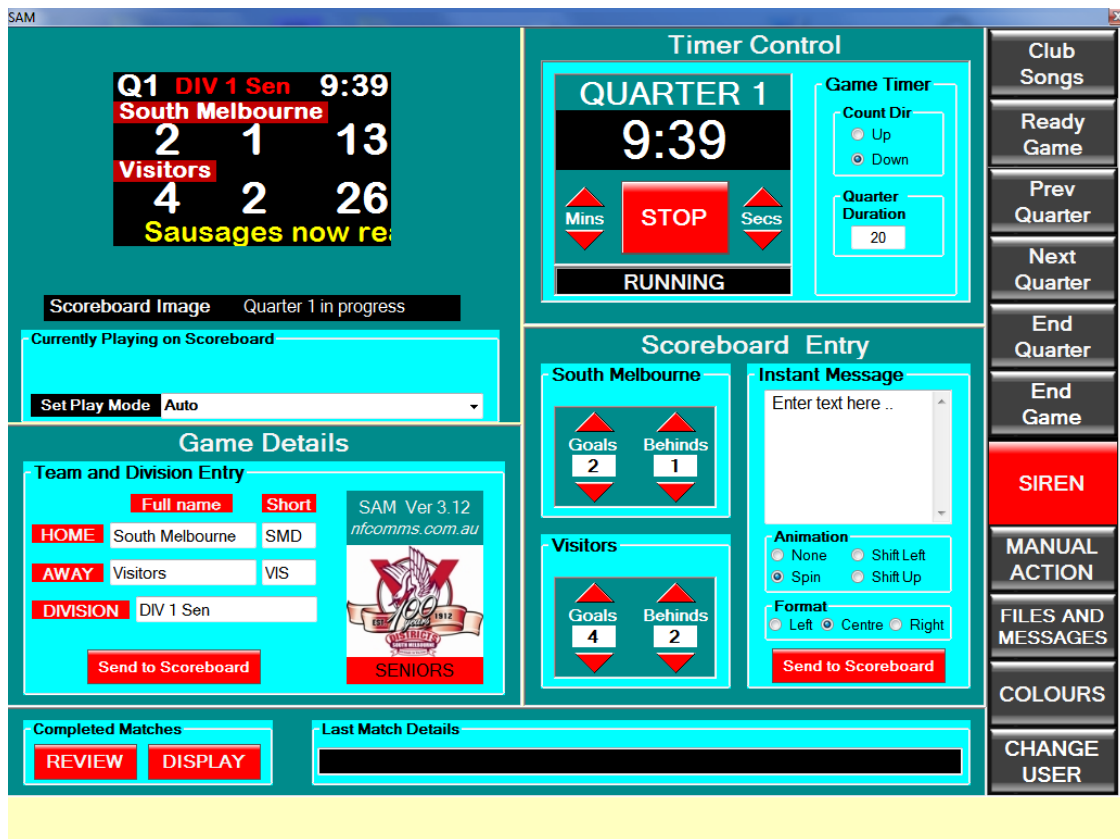


SAM AFL

Programming Manual

SAM (Scoreboard Access Module)
for **Australian Rules Football**
Video Scoreboard Control Software

Applies to
Software Version 5 and later



1 Introduction

SAM (Scoreboard Access Module) is the control software on the control PC that allows a Scorer and Programmer to configure and operate the NFcomms Electronic Video Scoreboard.

This document describes the functions of club office bearers and volunteers, the features of the SAM software and details of how the NFcomms Scoreboard is configured and operated.

To get the best out of the Scoreboard, it is important to allocate responsibilities to the four main scoreboard functions:

- **Sponsorship Co-ordination**
- **Scoreboard Programming**
- **Game-day Management**
- **Scoring and Time keeping**

Sponsorship, Game-Day Scoreboard Management, and Scoring and Time keeping are functions that currently exist at most clubs, and can be extended to also apply to the Scoreboard.

Scoreboard Programming is a new function. It is mostly performed at the start of the season or during the week prior to the game and involves collecting and configuring all the media files and when they need to be played on the scoreboard. Once configured, the scoreboard and the advertising and other information are automatically controlled in response to simple inputs from the **Scorer**.

This document details where the club's sponsorship and media files are located on the Laptop and how to arrange for automatic display of these files.

2 Basic Operation

2.1 Scoreboard Operational Responsibilities

To get the most out of the NFC Video Scoreboard, management of the operation of the scoreboard is important. A club can divide and allocate the functions & responsibilities of managing the scoreboard into the following functions. These responsibilities can be allocated to individual people in the club, but some of the functions can be performed by the same person.

- **Sponsorship Co-ordinator** has the normal sponsorship gathering role at the club, but expanded to include securing new types of sponsorship associated with the Scoreboard. The scoreboard can automatically show pictures, videos and text. These are displayed in response to basic triggers from the **Scorer**: before the start of the game, for each goal, during the quarter and half-time breaks and at the end of the game.

Major sponsorship deals are usually finalized before the season, but other types of advertising, such as "Pay per Goal", or a message on the **Variable Message Sign (VMS – scrolling text)** could be arranged at any time, even during the game.

- **Scoreboard Programmer** doesn't need to be around on game day. The **Scoreboard Programmer** is knowledgeable about the SAM Application running on the PC, is responsible for getting media files from the **Sponsorship Co-ordinator** and setting up the software to display the ads/VMS in the right place at the right time for all the games on game day. Organizes accounting and stats package.

Also, the **Scoreboard Programmer** ensures that the Club Song video is loaded. Playing the Club Song as the players run onto the ground always gets a great response. Even better if it's needed at the end of the game. Also, the **Scoreboard Programmer** can arrange with other clubs to play their club song, if needed. All Club Songs of competing clubs can be loaded – this is usually arranged before the game or season.

Pretty easy job – just put files in the right folders on the PC – see section 2.4.

- **Scoreboard Manager** hangs around on game day to start the PC, turn on the Scoreboard, roll up the security shutter and make sure everything's running properly, and be around to help the Scorer if needed. This function can be done by the Game Day Ground Manager. The **Scoreboard Manager** needs to ensure that the **Scorer/Time Keepers** are around to be ready to start the next game.

The **Scoreboard Manager** shuts down and packs up at the end of the day. A running sheet is provided that details the starting up and shutting down of the scoreboard.

- **Scorer/Time Keeper** enters the score and keeps time during the game. In Juniors, this is usually a parent with enough nous to press goal and behind buttons, and start and stop the quarter.

There are usually two **Scorer/Time Keepers**, one from each side who fill out the regulation score card – the home team Scorer can also update the scoreboard after each change of score. The **Scorer/Time Keepers** do not need to know how to handle the advertising – this is done automatically and was set up by the **Scoreboard Manager** earlier in the year or the week, or before the start of the day.

The **Scorer/Time Keepers** can, if they want, send **instant messages** to the scoreboard or update the **Variable Message Sign** at any time during the game.

2.2 File Types that SAM can display

SAM will display any file type that can be played in Windows Media Player. For example, compatible file types include:

Video files: .wmv .avi .mp4 .mov

Picture stills: .jpg .bmp .png .gif

PowerPoint files: .ppt

The **Sponsorship Co-ordinator** can compile video files using Windows Movie Maker, Final Cut, Adobe Premier Elements, Corel Motion Studio 3D, Corel Video Studio and most other media compilation software programs. Some advertisers will supply their own files.

The **Sponsorship Co-ordinator** can easily test whether a file is compatible with SAM by pressing the “Manual Action” button and selecting “Browse” and selecting the file you want to play, which can be on an external memory stick.

2.3 When files are displayed

Files can be played automatically at specific times, or manually at any time.

Automatic: At the start of each game, after each goal, during each quarter and half time break and at the end of the game. The **Scoreboard Programmer** usually configures the files that are played, and when they are played. This can be done during the week before game day.

See section 3 for details on how to setup automatic display of files.

Manual: Go to the Manual button on the right side of SAM. Select the file that you want to play. The file to be played can be located anywhere, including on the PC, from the network or on a memory stick.

2.4 Where to put media files

You can load files onto the PC or Laptop, say from a Memory Stick, in two ways:

1. Using SAM
2. Using Windows File Manager. SAM must be closed while copying files.

The following folder structure is used:

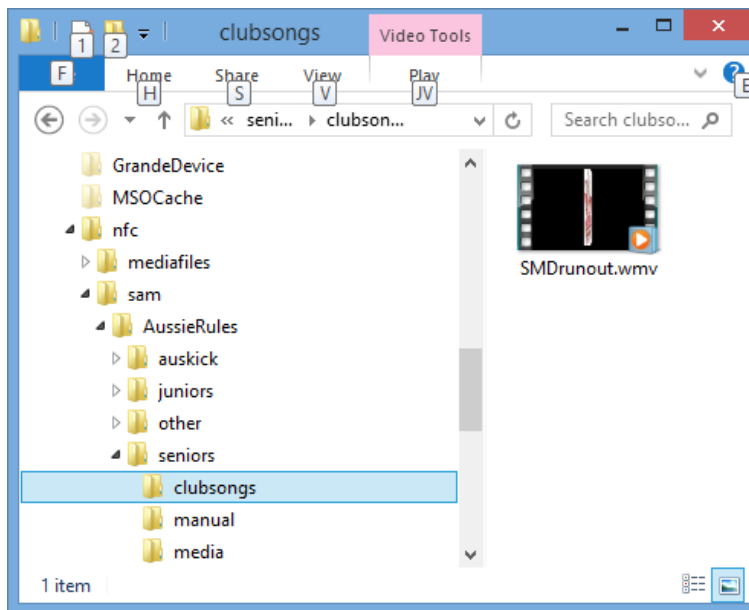
c:\nfc\sam\'Sport Type\'\'Account\'\'media folder\'

'Sport Type' can be AussieRules, Cricket, League, Rugby or Soccer

'Account' can be auskick, juniors, seniors or other

'media folder' can be clubsongs, manual or media

For example, save the clubsong of your club (and competing clubs if available) in folder
 c:\nfc\sam\AussieRules\seniors\clubsongs\myclubsong.wmv



'Account', such as Juniors or Seniors, allows different sections of the club to have their own area to store their own files. Junior and Senior sections of a club usually have their own sponsors and information files.

'account/manual' folder stores the files that are used by the Manual button to display files manually. These files can be displayed at any time.

'account/media' folder stores the files that are used in the automatic display of files in response to the Scorer's actions, such as the file displayed when the Goal button is pressed.

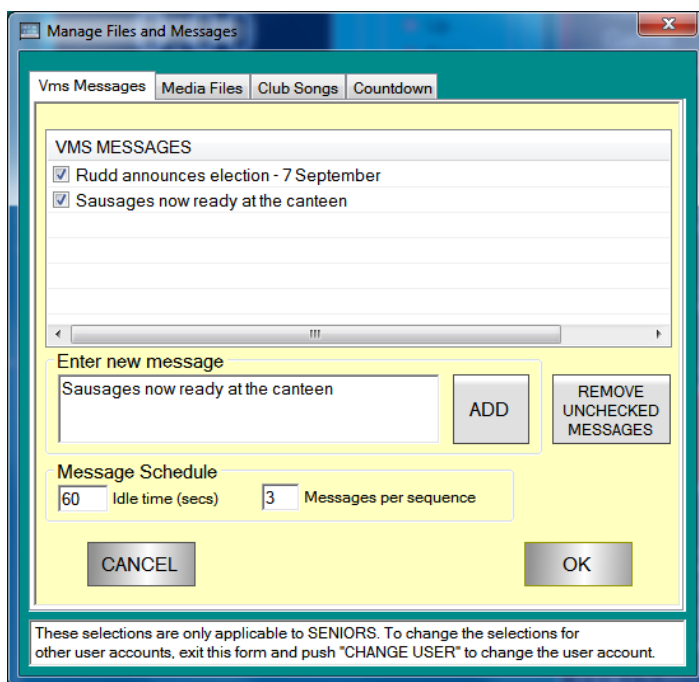
2.5 Scrolling Messages (Variable Message Sign VMS)

VMS messages are scrolling messages that appear along the bottom of the scoreboard. They are programmed by pressing the FILES AND MESSAGES button on the left of the SAM screen, and selecting the VMS Messages tab.

For example, when Kevin Rudd finally announced an election date for the federal 2013 election, the *Scorer* could have entered an informative message – whether or not anyone watching the game was interested. *“Rudd announces election - 7 September”* scrolls along the bottom of the screen.

To avoid the nuisance factor, a time when no messages are scrolled (Idle time) can be set. If there are lots of messages, they can be grouped by selecting “Messages per sequence”.

The *Scoreboard Programmer* and the Scorer can both change the VMS scrolling message.



2.6 Accounts

The Scoreboard can be used by many groups. For example, the Scoreboard might be used at various times during the year by the Club's Junior league, the Senior team, the local school, the Cricket club and maybe even for a league's finals series.

SAM allows separate accounts for these groups that allows separate group files and other information to be kept isolated and separate from other groups. Each account has its own folder structure as detailed in section 2.4.

When the SAM application starts, it asks which account will be used. To manage accounts (edit existing accounts, add new accounts and delete accounts), a separate application needs to be used. Use the "SAM Account Manager" application to manage SAM accounts.



3 Scoreboard Programmer Functions

3.1 Scrolling Messages (VMS)

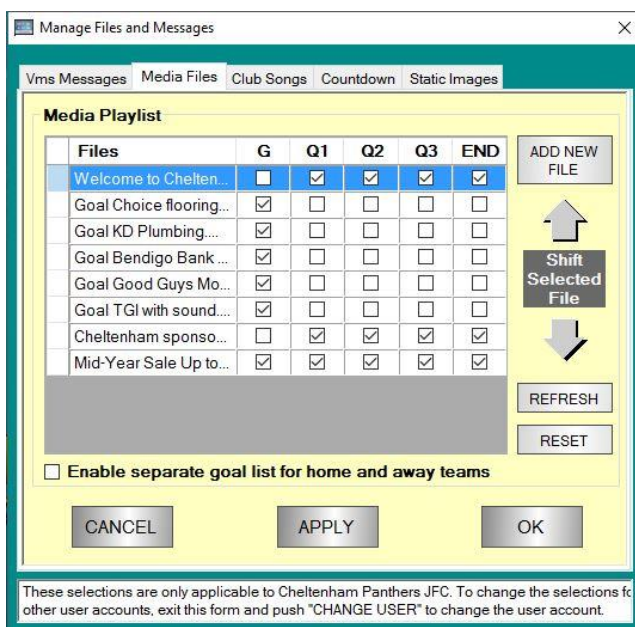
Scrolling messages are messages that scroll along the bottom of the scoreboard during the day. They can be set up by the **Scoreboard Programmer** at any time. They can also be controlled by the scorer during the game.

See section 2.5 for details of managing Scrolling messages.

3.2 Managing Media Files

The **Scoreboard Programmer** sets up the advertising and files to be displayed on the scoreboard on game day. The sponsorship media and the other information files are collected from the **Sponsorship Co-ordinator** and loaded into the `..\media` folder.

Press the **Files and Messages** button and go to the **Media Files** tab to get the following screen:



This Tab shows the Media Playlist. This is the list of media files available for display, and it also shows the triggers that will cause each file to be played.

Adding Media Files to the Playlist

Manually add a new file by pressing the “Add New File” button. If you are adding files from a memory stick, the file will be copied from the media stick to the `..\media` folder.

If you have earlier loaded files using File Explorer or there are already files in the `..\media` folder, you can press the “Refresh” button to populate the list.

When file is played

For each file in the Playlist, the **Scoreboard Programmer** can decide when it is displayed on the scoreboard.

Triggers to cause each file to be played on the Scoreboard are listed across the top of the matrix. Tick the check box for each file that you want to apply the trigger:

- G Play the file when the **Scorer** presses the Goal button.
- GH Play the file when the **Scorer** presses the Goal button for the HOME side.
- GA Play the file when the **Scorer** presses the Goal button for the AWAY side.
- Q1 Play the file during the Quarter 1 break
- Q2 Play the file during the Half time break
- Q3 Play the file during the Quarter 3 break
- END Play the file between games (End of game, start of next game)

Goal Trigger For each Goal button press, the next file in the list will be displayed on the Scoreboard. Only one file will be displayed for each Goal button press.

You can play separate files for the **Home** side and for the **Away** side – select the **“Enable separate goal list for home and away teams”** check box to expand the Playlist to include GH and GA triggers. If this box is unchecked, only the G column is selected and the checked files will play sequentially for any goal.

Quarter Break triggers The quarter breaks start when the END QUARTER button is pressed. The files checked with the Q1, Q2 or Q3 (as the case may be) will start playing in sequence after a 15 second delay.

During the break, all files that are checked will be displayed in sequence and the sequence will be repeated until the NEXT QUARTER button is pressed. The order of display is the order in the list. This can be changed using the “Shift Selected File” button.

NOTE: The score screen will be displayed after each file is played so that the main function of the Scoreboard (which is to show the score) is not swamped by the displaying of files.

Between Games The “Between Games” trigger is started when the END GAME button is pressed. If the END box is checked, the checked files will be displayed on the scoreboard in sequence before the game is started, and also when the game is ended, ie between games.

NOTE: After the END GAME button is pressed, the score will still be shown for 2 minutes before the files will start playing.

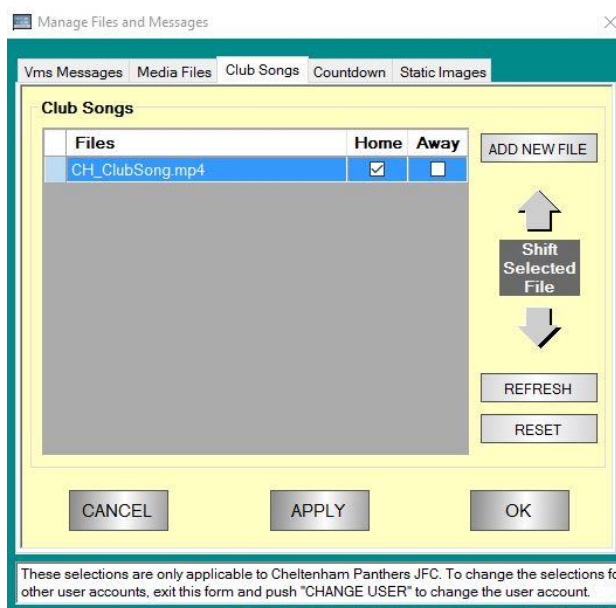
NOTE: The Results of previous games on this game day, including the game just ended, will be displayed on the Scoreboard after the sequence of files has been played. After this, the file sequence is repeated until the READY GAME button is pressed to start the next game.

3.3 Managing Club Songs

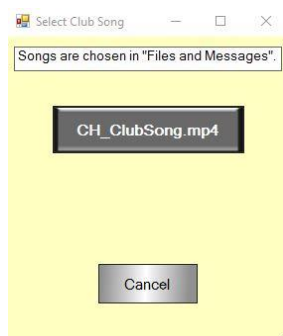
Club songs can be played on the Scoreboard at any time. The Scoreboard system needs to be connected to the club's sound system.

The Club songs are usually played when the team runs onto the ground and when the team wins at the end of the game. Typically, the **Scoreboard Programmer** will load the club's song, in video format, at the start of the season. If other clubs in the same division have Club song files, these can also be loaded, either at the start of the season or on the day.

To setup the Club Song files, press the **Files and Messages** button and go to the **Club Songs** tab to get the following screen:



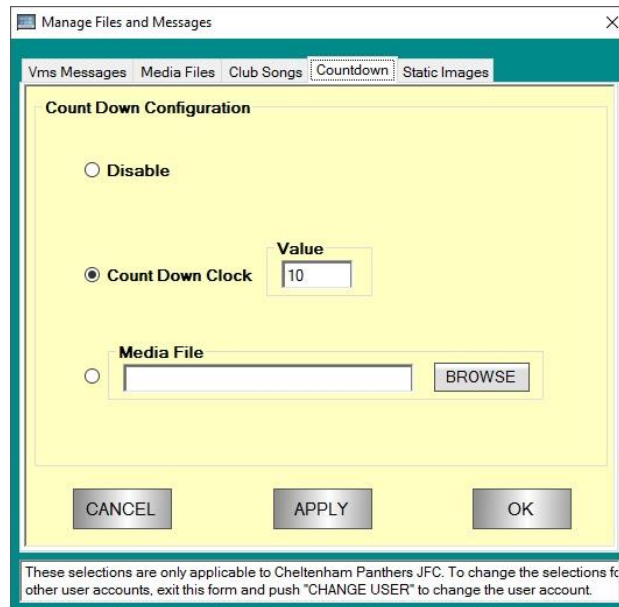
Add the Club Song video and select Home or Away. This will populate the Club Song window when the CLUB SONG button is pressed.



The CLUB SONG button can be used before the games starts when the teams run onto the ground, and also at the end of the game when the team wins.

3.4 Countdown

When the READY GAME button is pressed, before the main Score Screen is displayed, a countdown clock or file can be played.



There are three options:

1. Disable the Countdown clock. As soon as the READY GAME button is pressed, the Score screen is displayed.
2. Use the default countdown clock. The time (in seconds) can be changed.
3. A user-developed countdown file can be used. Select the file using the BROWSE button. When the READY GAME button is pressed, the selected file will be played. When the file has finished, the main Score screen will be displayed.

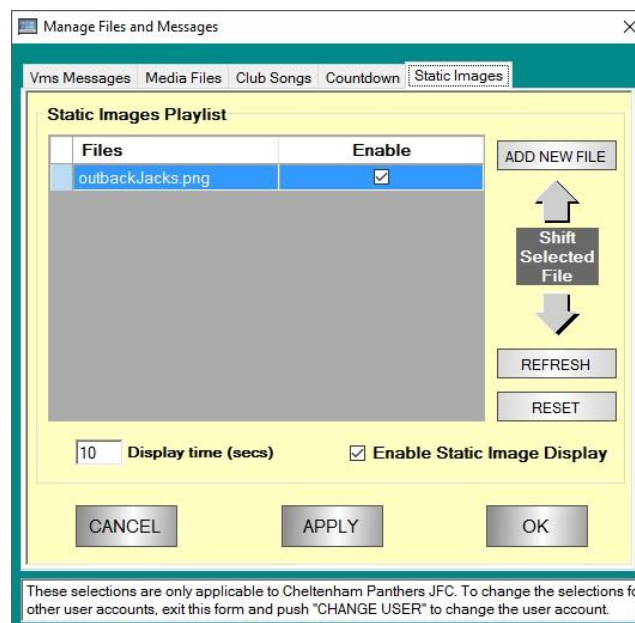
3.5 Static Image Display

Some screen sizes can display static images on the right hand side of the screen. This can be useful for showing one or more advertisements on the scoreboard during the game.

Sometimes the physical location of a Scoreboard does not allow the permanent display of advertising hoardings fixed to the side, top or bottom of the scoreboard. However, advertisements are allowed when the Scoreboard is operating. The Static Image feature of SAM allows an area of the scoreboard to permanently display one or more advertisements when the Scoreboard is in operation, as if they were fixed hoardings.



To manage the display of Static Images, press the **Files and Messages** button and select the **Static Images** tab to get the following screen:



Add the Static Images to the Playlist and enable the images that will be displayed on the Scoreboard. The time that the image is displayed can be changed.

NOTE: The Static Image display (and the Score Screen) will be over-written while the files selected in the **Media Files** tab are being displayed.

4 How it Works

The NFcomms Scoreboard uses the HDMI output of a Computer (PC or Laptop) to display information. The computer is pre-configured at the NFcomms factory to display an area of the computer's screen, usually a rectangular area near the top left of the Laptop's display. So anything on the Laptop's display in this area will be displayed on the scoreboard.



GOALS	BEHINDS	TOTAL
2	1	13
4	2	26

Q2 DIV 1 SEN 9:38
St Pauls
East Brighton

The Laptop's mouse is prevented from displaying in this area of the computer so that it does not interfere and show on the scoreboard.

A video controller can be connected to mix the video and audio sources that are presented to the Scoreboard, however, normally the controlling PC/Laptop is used to mix the various sources without an expensive video controller.

Audio

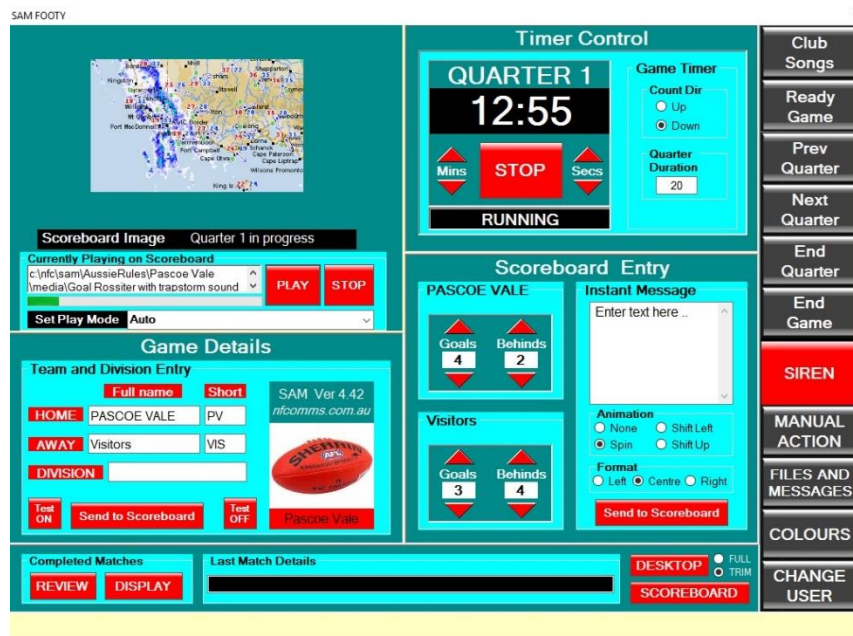
Audio can be played by connecting the unbalanced output of the PC/Laptop to a sound system.

If the Scoreboard system is integrated with NFcomms' 5GHz radio link, the Balanced and Unbalanced audio outputs from the Controller box (at the pavilion end) and/or the outputs at the Scoreboard end can be connected to a sound system or powered speakers.

All files played through SAM will play the audio through the connected sound system and speakers.

Web site display

Web pages can be displayed on the Scoreboard. Minimize the SAM screen and start the browser. Go to the web page that you want to display on the scoreboard, such as the BOM weather radar. Position the browser, maximize SAM and press “DESKTOP” to show the weather radar on the Scoreboard. This can be done with any web page, including YouTube, to show video.



Real-time Live Camera

Similar to live Web streaming, live camera feeds can be fed into the PC/Laptop and integrated into the Scoreboard. The camera can be connected to the PC/Laptop wirelessly so that roaming is possible.

Live TV and DVDs

Using a simple Digital TV dongle, live TV can be shown on the Scoreboard via the PC/Laptop. DVDs can also be played on the scoreboard through SAM, via NFComms’ special Video player app, or through some PC video player apps. Sound is played through the connected speakers or sound system.

Microphone

Microphones can be connected via the sound system or through a wireless microphone connected via the PC/Laptop. This is useful for making announcements during the game, such as introducing the teams before they run onto the ground, or for example to encourage spectators to buy raffle tickets from a roaming seller during the game.

5 Aussie Rules Game Flow

A typical game flows as follows:

1. The scoreboard has been setup by the **Scoreboard Manager** and SAM is started.
2. The User Account is selected, then SAM automatically starts displaying the pre-game playlist.
3. The **Scoreboard Manager** has directed the **Scorers** to the Scorer's box where the Scoreboard PC is running SAM.
4. **Game details.** Before the game starts, the **Scorers** fill in the Team names and Age Group or division in the Game Details box.
5. **Timer.** In the Timer Box, the **Scorers** ensure that the duration of the quarters is set correctly, and whether the clock counts up or down.
6. **Club Song.** As the players run onto the ground, the **Scorer** can press the 'Club Songs' button and select the appropriate Club Song/Video.
7. **Ready Game.** A few moments before the Umpire is ready to start the game, the **Scorer** presses the 'Ready Game' button. This action starts a large countdown clock (or the countdown file) to indicate to the crowd that the game is about to start. The timing of this can be a bit tricky, unless the umpires have been informed of the procedure. After the countdown has finished, the score is displayed (zero), Quarter 1 and the time are displayed.
8. **Start Game.** The Umpire holds up the ball, the **Scorer** sounds the Siren. When the umpire bounces the ball, the **Scorer** starts the Timer.
9. **Game On.** The **Scorers** can now relax and watch the game, changing the score as needed by pressing the appropriate Goal or Behind button. If a goal is scored, SAM automatically plays the pre-programmed file – the file automatically stops when completed, and the Scoreboard then reverts to the score. The **Scorer** can press STOP at any time to stop the file being displayed if necessary.
10. **End of Quarter.** The **Scorer** sounds the siren at the end of the quarter and then presses the End Quarter button. The **Scorer** can also start the break timer. After a short delay, the scoreboard starts to show the pre-programmed files. The current Score screen will be also displayed regularly during the break.
11. **Next Quarter.** A few minutes before the next quarter, the **Scorer** presses the Next Quarter button. This action stops the display of ads and files and shows the Score screen. When the umpire holds up the ball, the **Scorer** sounds the siren, and when the umpire bounces the ball, the **Scorer** starts the timer.
12. **Instant Messages.** During the game, apart from adjusting the score, the **Scorer** can display "Instant Messages", change or add to the scrolling text messages and manually display files or pictures such as the picture of the player who scored the last goal.
13. **End Game.** Steps 10, 11 and 12 continue until the end of the game. The **Scorer** sounds the siren. The **Scorer** then presses the "End Game" button. The score will remain on the scoreboard for a number of minutes before the inter-game playlist is displayed. It's now back to Step 3.