

# SCORING MACHINE SOFTWARE

(Version E308)

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## Licence

The software is copyright. It may not be passed on or sold. Modifications become part of the original copyright.

The software is licenced for free use by the Photographic Alliance of Great Britain, and by any of its member Federations and affiliated Clubs.

## Features

These features are the same as all previous versions.

- Number of judges 1-8.
- Score range 2-5 or 1-5.
- Visibility adjustment (0-4) of individual judge scores.
- Testing Handset encoding.
- Scoring Machine to accept individual judge scores and calculate the total.

These features are in all E3xx versions.

- Saving of the individual judge's scores, not integrated with any entries list, for subsequent statistical analysis.
- Integration with a list of entries to allow announcing of titles, and saving of scores.

These features were added in E304.

- Preparation of a score sheet report for manual score recording, given an integrated list of entries.
- Preparation of summary and detail results reports after scoring, given an integrated list of entries.

These features were added in E305.

- Viewing of awards records with quick addition/editing of Awards, given an integrated list of entries, and removal the advisory timer from the scoring form.

These features were added in E306.

- A 'Home' button and an unscored entries count on the scoring form.
- A Histogram result report showing the numbers of entries at each score level, with messages for any no scores or errors.

These features were added in E307

- Ability to use the system for manual recording of scores from a single judge. Scores can include half marks and entries can be held back for scoring later. The feature allows use of the same workflow for a single judge as for multi-judging.

These features were added in E308

- With multi-judge scoring, any handset position (1-8) can be designated as an active judge, or as an inactive judge whose scores do not count towards the total for an entry, or as disconnected.

## Media

Scoring\_E308.xls is an MS-Excel 97-03 workbook file, requiring availability of Microsoft Office Standard, or standalone Excel, version 2000 or later.

Copy the file required to a convenient location eg, the desktop.

## Setting the Excel Security Level

All Excel versions of the software contain code in Visual Basic for Applications (VBA), requiring a change to the default Excel security settings to allow the software to run. Open Excel, and set/check the Macro security level.

In Excel-2000 do Menu>Tools>Macro>Security... The installation default security level is 'High', which disables all macros. The security setting must be reduced at least to 'Medium', which will require manual acceptance of macros when the scoring software is opened. A setting of 'Low' allows the software to run without a warning.

In Excel-2010, the security settings are in the Trust Centre under Menu>File>Options. Choose a suitable equivalent security level.

## Software Introduction

The software Scoring\_E308.xls is distributed as a workbook containing three worksheets:

- **Startup** contains an Options panel, an Actions panel and a Reports panel. The worksheet is protected from direct user changes during use.
- **Scores** may contain sample data for recorded scores.
  - A sheet with this name must be present when the scoring function within the software is started, where the option is set to record the sets of individual judge's scores.
- **Entries** may contain sample data for a list of entries.
  - A sheet with this name must be present when the scoring function within the software is started, where the option is set to integrate with an entries list. And it must be present when any of the reporting actions are run.

During use, additional worksheets may be created:

- **Score-Sheet** contains a manual score sheet listing the entries.
- **Histogram** contains a histogram of the score results and any errors
- **Results-Summary** contains a summary of the total scores by entrant.
- **Results-Detail** contains a detail report by entrant of all entries with their scores.

All worksheet names are reserved. No worksheet may be renamed. At all times, and however many worksheets are in the workbook, the worksheets may be in any order. The worksheets are activated by name as and when required.

## Individual Events

Take a copy of the master file and rename for use with each event.

In this specification, the individual event worksheet is referred to as 'Event.xls'

## Starting the Software

Open the Event.xls file. The Startup worksheet is displayed. The option values are as saved from any previous use.

Remove any sample data in Scores and Entries prior to adding live data.

### *The Options panel*

Change the options only by using the buttons. Nothing can be directly entered on the sheet which is protected.

- **Configure Handsets:** The configure handsets form is opened to set the judging mode, score range and handsets configuration. The current configuration is listed immediately below.
- **Score Visibility:** Range 0-4. Default 2. Use the Decrease or Increase button to change the visibility level of the individual judge's scores on the Scoring form. The new value is shown. This value is ignored when there is only one judge.
  - The visibility option is provided so that individual scores cannot be seen (visibility 0), or can only really be seen by the operator and not by any audience (visibility 1-2), or can be easily seen during private events (visibility 3-4). The total score is always highly visible.
- **Scores Recording:** 'In Use' or 'Not in Use'. Default 'Not in Use'. Use the Change button to swap. The current option is shown.
- **Entries List:** 'In Use' or 'Not in Use'. Default 'Not in Use'. Use the Change button to swap. The current option is shown.

### Configure Handsets

The Configure Handsets form allows the following to be set. Each uses a combo box where only the listed options can be chosen.

On opening the form, the values shown in the boxes are those currently saved in the system.

- **Judging Mode:** May be Multi-judge or Single-judge. For Single-judge, the remainder of the form can be set and the results can be saved, but none will have any effect when scoring in Single-judge mode.
- **Score Range:** May be either '1 – 5' or '2 – 5'. This determines whether the '1' button on a handset is recognised as a score or an error.
- **Handset (1-8):** Each may be 'Disconnected', 'Inactive Judge' or 'Active Judge'. Only handsets for active judges will count towards the score for an entry. A handset for an inactive judge may be used to allow a trainee judge to score and those scores can be saved for statistical analysis if Score Recording is in use.
- **Cancel:** The form is closed leaving the original settings unchanged.
- **Set Defaults:** The option boxes are set to the system defaults of 'Multi-judge', score '2 – 5', handsets 1-3 as 'Active Judge' and handsets 4-8 as 'Disconnected'. This is for display on the form only and does not modify the currently saved system settings.

- **Save:**
  - As a validation test in Multi-judge scoring, there must be at least two Active Judges defined. Otherwise a warning is issued, the system defaults are set on the form, and the user must adjust and save as required.
  - On passing validation, the values currently in the option boxes are saved for use by the system. The Startup worksheet displays the options.

The 'X' button to close the form is disabled with focus moved to 'Save'.

### ***The Actions panel***

- **Handset Testing** opens the handset testing form which allows testing the encoding for any handset. The form shows the graphic character entered, its ASCII value, and the decoded judge and score values.
  - Keys with a graphic, but which are not valid for scoring, show judge and score values of zero.
  - An inoperative key, or a key with no graphic eg, control and function keys on the normal keyboard, have no effect on whatever is already displayed.
  - Close the form using Return (or ESC, or the form's 'X' button).
  - There may be a limit on the total characters which can be entered. If the display freezes, then close the form and reopen it.
- **Scoring** opens the scoring form, which is described below. For single-judge scoring, the action is prevented if an Entries List is not in use and any use of the Scores list is cancelled.
- **Awards** Opens the awards editing form, which is described below. The action is disabled if an Entries List is not in use.

### ***The Reports Panel***

- **Score Sheet** Uses the data on the Entries worksheet to create a new Score-Sheet worksheet with a printable manual score sheet of the entries in scoring order. The action is disabled if an Entries List is not in use.
- **Result Sheets** Uses the data on the Entries worksheet to create a new Histogram worksheet, a new Results-Summary worksheet and a new Results-Detail worksheet. These are printable reports. The content of the results worksheets will only be relevant after scoring, where the scores are recorded on the Entries worksheet. The action is disabled if an Entries List is not in use.

### **Save + Close: (button)**

Unless there is a good reason, the file should always be saved on closing, so that any changes to the options, scores, entries and any reports are retained.

If Excel is closed using its 'X' button, then respond Yes / Save to the usual system save options.

## Basic Scoring – Multi-Judging

With both the 'Scores recording' and 'Entries list' options set to 'Not in Use', click the Scoring button on the Startup form. The Scoring form is displayed.

### Form Layout

- The form title is 'Scoring Machine'
- The next section, with 'Seq', 'Ent', 'Title', and 'Score' boxes is unused, and a greyed message is shown for the Title.
- The 'Home', 'Previous', 'Next' and 'Next Unscored' buttons are greyed.
- The long 'Data' box is where the handset graphic characters are received.
- There is space to show 8 judges, but only the connected handsets are shown. For each:
  - Active judges have their 'Judge' title in black. Inactive judges have their title in magenta.
  - The score box is zero until a valid score is received.
  - The flag colour is yellow. Other flag colours are described below.
- The large 'Score' box is for the total. It is flagged yellow until a total is available. Other flag colours are described below.
- The button labelled 'Return = Reset' will clear the form. This button has other captions and functions, described below, where other options are chosen in the Startup sheet.
- The button labelled 'ESC = Reset' always clears the form.
- The 'Close' button will close the form, and return to the Startup sheet.
- The 'X'; button is disabled with focus moved to the 'Close' button.

### The Basic Scoring Process

For multi-judging, the judges use handsets. As the judges enter scores, characters from the handsets appear in the Data box. Valid scores are interpreted from the data and are shown against each judge using the current visibility level. Each judge is flagged with a colour code:

- Yellow means no score has yet been entered
- Green means a valid score has been entered, but the judge can still change the score. The score value is shown at the current visibility level.
- Red is only used if the allowed score range is '2-5' and the judge scores '1'. Red changes to Green as soon as a valid score is entered. Once the flag is Green, another invalid score of '1' is ignored.

The Total is flagged Yellow until all active judges are Green. Then the Total value is shown, and flagged Green. The Total value can change if an active judge then enters a different score. If any active judge scores '5', then the total is flagged Cyan instead of Green. This may be needed if such items must be held back.

Scores for inactive judges do not count towards the total. Failure of an inactive judge to score does prevent completion of the scoring cycle.

The scoring cycle is completed when the operator decides to announce the Total, and uses **Return** on the keyboard, or clicks the 'Return = Reset' button on the form, to clear the judges' scores.

NOTE. Alternative actions for Return are described later.

Using **ESC** on the keyboard, or clicking the 'ESC = Reset' button on the form, will also clear the judges' scores.

## Scoring with Saving of the Individual Judge's Scores

The Scores worksheet is described below. This section describes the difference in the scoring process when saving scores.

When an entries list is also being used, then the scoring process follows that method (below), and saving scores is done as well.

When saving scores is the only option, the scoring form looks exactly like the basic scoring layout, except that the Return button caption is 'Return = Save Score'.

The entry of judge's scores, the display of individual and total scores, and the colour coding of the flags is the same as for basic scoring (above).

The scoring cycle is completed when the operator decides to announce the Total, and uses **Return** on the keyboard, or clicks the 'Return = Save Score' button on the form, to copy the individual judge's scores and the total to the Scores worksheet, and also clear the judges' scores.

Using **ESC** on the keyboard, or clicking the 'ESC = Reset' button on the form, will clear the judges' scores without saving them.

## The Scores Worksheet

The various testing and scoring forms are modal and must be closed before accessing the Scores worksheet.

No prior preparation of the Scores worksheet is required before using it with the Scoring form.

When the Scoring form is opened with the Scores recording option set, then the Scores worksheet is checked.

1. If the Scores worksheet is not found, then this is reported as an error.
2. If there are a large number of rows already present, then this is reported as an error.
3. If errors are reported, then the user has the option of continuing scoring without saving scores, or of closing the Scoring form to correct the errors.

If there are no errors, then data is appended to any already present in the sheet.

1. The first appended row shows column headers in bold. Column A: 'Date'; column B: 'Time'; columns C to J: 'J1' to 'J8'; column K: 'Total'.
2. Subsequent rows record the date, the time, the individual scores and the total score, all each time a score is accepted on the Scoring form. Unused judge columns are left blank. Scores are not recorded if the Scoring form is reset using **ESC**, or when the Scoring form is closed.
3. Recording stops when the Scoring form is closed.

No analysis of the data is provided in this system. Analysis may require extracting the data into another system eg, another Excel workbook.

## Scoring Using an Integrated Entries List

Preparation and checking of the data on the Entries worksheet are described below. This section describes the difference in the scoring process when using an entry list.

When the Scoring form opens for display, there are differences from basic scoring:

- The form title will show the event name if that has been included with the entry list.
- The 'Seq', 'Ent', 'Title' and 'Score' boxes are used, and the first entry will be displayed. The Title will be in all upper-case.
  - Normally, the entry will have a zero score, flagged Yellow.
  - If an entry is being rescored, it can have a non-zero score, flagged Green.
- The 'Home', 'Previous Entry', 'Next Entry' and 'Next Unscored' buttons are available.
- A 'Currently Unscored' box is visible and will show the number of unscored entries.
- The Return caption is 'Return = Save Score and Advance'.

The entry of judge's scores, the display of individual and total scores, and the colour coding of the flags is the same as for basic scoring (above).

The scoring cycle is completed when the operator decides to announce the Total, and uses Return on the keyboard, or clicks the 'Return = Save Score and Advance' button on the form.

- Normally, the currently displayed entry has a zero score (flagged Yellow). The total score from the judges is copied to the entry score (flagged Green) and to the Entries worksheet, there is a pause, and the next entry is displayed.
- If the current entry has a non-zero score, and the judges new score is the same, then the new score is accepted, there is a pause, and the next entry is displayed.
- If the current entry has a non-zero score, and the judges new score is different, then confirmation is requested.
  - The default confirmation is 'No'. The form is reset and the entry does not advance.
  - The alternate confirmation is 'Yes'. The new score replaces the old score, there is a pause, and the next entry is displayed.

Using ESC on the keyboard, or clicking the 'ESC = Reset' button on the form, will clear the judge's scores, and the entry does not advance.

- If the current entry has a non-zero score then confirmation is requested that the current score should be cleared. The default confirmation is 'No'.

Using Return on the keyboard or clicking the 'Return=' button on the form while there is no total judge score, will be treated as an ESC action, and the effect will be as above.

After the last entry has been scored, there is an End of Competition warning, and the entry does not advance.

## ***Move Entry Buttons***

At any time:

- The 'Home' button can be used to return to the first item in the entry list.
- The 'Previous Entry' button can be used to reverse up the entry list, either to check data or to rescore an entry. There is a warning if the beginning of the list is reached.
  - No scores are recorded in the Scores worksheet (if that is in use).
  - The form moves to the previous record, except for beginning of list, without any saving or change of a score on the current record.
  - The form is reset for the displayed record.
- The 'Next Entry' button can be used to advance down the entry list. There is a warning if the end of the list is reached.
  - No scores are recorded in the Scores worksheet (if that is in use).
  - The form moves to the next record, except for end of list, without any saving or change of a score on the current record.
  - The form is reset for the displayed record.
- The 'Next Unscoored' button moves down the list and stops at the next unscoored item.
  - If the current item is unscoored, then the same entry remains displayed.
  - If there are no more unscoored items, then the last entry is displayed and there is a warning.
  - The form is reset for the displayed record.

## ***Skip Function***

There may be a reason why one or more entries in the list are unavailable for scoring. The operator has two options:

- Click the 'Next Entry' button on the form (see above).
- Provided that there is no other text in the Data field, the operator can use the keyboard to enter the skip command followed by Return, to skip the entry and advance to the next entry.
  - The skip command is the text `##` (two hash characters), which is only relevant when working with entries.
  - If there is text in the Data field, then use the ESC key to reset the form without advancing. and then enter the skip command.
  - The effect of the Skip function is the same as 'Next Entry' (see above).

## **The Entries Worksheet**

The various testing and scoring forms are modal and must be closed before accessing the Entries worksheet.

As distributed, the Entries worksheet may contain some sample data. Remove any sample data rows before entering real data for the event.

The data may be edited as required. The data is only checked and used when the Scoring form is opened with the 'Entries list' option set to 'In Use', or the reporting functions are used.

After scoring, the Entries sheet retains the scores alongside the original event data.

No analysis of the data is provided in this system other than the available Reports. Analysis may require extracting the data into another system eg, another Excel workbook.

## Required columns

Row 1 is required to contain the column headers. Certain headers are required and must be typed exactly as shown.

- **Seq**
  - The data are numeric, giving the desired sequence order of showing entries from the Entrant.
- **Ent**
  - The data are alphanumeric representing the Entrant, giving the order of showing entries within each block by 'Seq'.
  - If the Entrants must be shown in a particular order, then the data should be numeric in the order required.
- **Title** The title of the entry. There is no specific limit on the number of characters. At least 60 characters can be displayed on the scoring form for announcement. Competition presentation systems may have different limits.
- **Score** The data is left blank when preparing the entries, and will be filled by the scoring process.

## Optional columns

There may be any number of other column headers, for any data which may be required by the event.

Some column header names are specifically recognised by the score sheet and results reporting functions.:

- **Entrant** Used for alphanumeric data where 'Ent' is required to be numeric.
- **Photographer**
- **Award**

Other column headers with data may be included but will not be used during reporting.

- **Tie, Category, Nature, etc.** Fields specific to the sample event.

Remove sample columns not required for the event, and add any that are required.

## Column Order

All the columns, required and optional, may be placed in any order. Although not ideal, there may be columns with no header. The software can skip across as many as four contiguous blank headers.

Permitting any column order allows the user to match to an entry form. For example, it would be usual to put the 'Score' column at the extreme right as 'Score' would not be data typed from an entry form.

## Event Title

Row 2 may optionally be used for the event title, and this title will be displayed during scoring.

- The 'Sequence' value must be 0 (zero)
- The 'Title' value is the event title. At least 60 characters can be displayed.
- Any other data in this row is ignored.

## Entries

The entries are typed in rows. The rows may be typed in any order starting in row 2 if there is no event title, or otherwise in row 3.

There is no requirement to enter all the data at one time. The workbook may be saved and closed, and later reopened as required to edit or enter more data.

Usually all the entries for one entrant will be typed sequentially.

There is no requirement for 'Ent' numbers (if numbers are used) to be typed in a consecutive sequence.

There is no requirement for all entrants to have the same number of entries.

For initial readability, a blank row may be used between entrants. The software can skip across as many as four contiguous blank rows.

While the most common use for the software will be where each entrant (Club, Federation, etc) provides a group of entries ordered by 'Sequence', other formats can be fitted. For example:

- An event permitting one entry from each Photographer could use 'Seq'=1 for all, and a unique 'Ent' value for each Photographer.
- An event where the entries must be shown in an exact particular order should leave the 'Seq' column blank initially; sort the entries manually as required eg, by Title; and then fill 'Seq' as a numeric data series starting from 1. (Zero is reserved for the event title.)

Before opening the Scoring form, where the 'Entries list' option is set to 'In Use', there must be a value for 'Seq' in every row containing data. Any row not containing a 'Seq' value will be ignored.

## Advanced Options for Entry Lists

It is not necessary to type the data directly onto the Entries sheet. Data can be copied, and pasted into the Entries sheet.

An entire sheet can be copied from another workbook and pasted in as a new sheet. The existing Entries sheet can be deleted, and the newly pasted sheet renamed as 'Entries'.

## Sorting before Scoring

The user is not required to sort the data on the Entries worksheet before scoring.

The processes run before scoring are described here so that possible errors in data preparation can be avoided. These processes are run only when the Scoring button is clicked on the Startup worksheet to open the Scoring form, where the 'Entries list' option is set to 'In Use'.

1. A missing 'Entries' sheet is reported as an error.
2. The columns are examined to ensure that all the required column headers are present. The reserved optional column headers are also recorded. Missing required column headers or duplicated required/reserved column headers are reported as errors.
3. The total number of columns in use is evaluated up to and including the rightmost non-blank header.
4. The rows are examined, using only the data in the 'Seq' column. The total number of rows is evaluated up to and including the last non-blank 'Seq' value.
  - a. NOTE: To avoid this process losing control, there is a maximum row count of 1500. The maximum can be changed if required.
5. Having no data below the header row is reported as an error.
6. Given the total columns and total rows, the table of data rows is sorted, first on 'Seq' and second on 'Ent'. A title row, with 'Seq'=0, remains at the top.
  - a. It follows that the user returning to the Entries worksheet after scoring, will find the data in the order of showing, and not in the order of data entry.
  - b. The order of showing is in blocks by 'Seq', and within each block by 'Ent'.
7. The number of non-blank rows is re-evaluated to eliminate any blank rows now sorted at the end.
8. The title row (if used) is read to give the event title, which is displayed on the scoring form. Having no data below the title row is reported as an error.
9. If there have been any errors reported during these processes, then use of the Entries worksheet is turned off. The user has the option of scoring without the list, or of closing scoring to correct the errors.

## Scoring – Single Judge

Manual scoring is available when there is only one judge and an Entries list is used for announcing. Judging handsets are not used. Any use of the Scores list is cancelled as the single judge scores are recorded on the Entries list.

The Scoring form displays as for multi-judging except there are no boxes for the individual judge's scores.

Because an Entries list is used, the image title will be displayed and the buttons to move up and down the list are available if required.

As the judge announces the score, the operator types that score followed by Enter.

- Corrections can be made to typing by using backspace.
- There is no particular score range limit. Half marks are allowed, typed as xx.5. Scores are rounded to the nearest half-mark. A valid score is flagged in green.
- An image can be held back by typing 'H' (or 'h') followed by Enter. Any other data entered either before or after the 'H' is ignored. Holding back records a score of zero, flagged in cyan, leaving the image ready to be scored later.
- If the image has been scored previously, then any change to that score requires verification.
- Where 'H' is not used and the text entered is not a valid number then the data is ignored, the score box is blank and flagged red, and the entry does not advance.
- The score form shows a running total of the number of unscored images

On reaching the end of the competition, there may be unscored images held back, in which case a button is made visible to access the HeldBackImages form for easy scoring of those images.

### HeldBackImages Scoring Form

The HeldBackImages form has:

- A 'Refresh List' button
- A 'Close' button
- The 'X' button to close the form is disabled with focus moved to 'Close'.
- Up to 20 rows for display of unscored images, where each row shows the **Seq**, **Ent** and **Title** values, and there is a box to type the **Score**.
- A '...more' warning flag if there are more than 20 unscored images, meaning that some are not listed.

The operator chooses the row according to the image being scored by the judge, so the judge can score in any order. The operator can tab down the score boxes in the rows, or can click into any score box. The operator enters the score, which must be a number with half-marks allowed. A score can be edited.

The 'Refresh List' button will file any non-zero scores, with scores rounded to the nearest half mark, and redisplay the set of images which still have zero scores. Where this shortens the list, images which previously overflowed the form may then be included.

The 'Close' button will first refresh the list to file any non-zero scores and then check the residual count of unscored images. If there are any unscored images, then close of the form must be verified. It may be relevant to have unscored images if there are any disqualifications.

## Entering Awards

After scoring, awards can be added to the Entries sheet using the Awards edit form. Click the Awards button on the Startup form.

The Awards form will only work if:

- Scoring with an integrated Entries sheet is set in the Options.
- The Entries sheet has the required column titles (**Seq**, **Ent**, **Title** and **Score**)
- The Entries sheet also has the optional column for **Award**.
- The Entries sheet has valid rows below the column titles and any optional event title. A valid row is one containing at least a non-zero value for **Seq**. Scoring could have proceeded, and awards can be allocated without data in the **Ent** column. **Title** data is optional, but desirable for manual data checking. Data for **Score** would be usual as awards are allocated after scoring.

The form is displayed with:

- Any available event title at the top
- A table of existing awards, where up to 12 can be shown, and a message below the table will advise if there are more. The data in this table is not editable.
- A row of data entry/display boxes for user input.

There are two buttons on the form:

- 'Clear all' will remove all existing awards and redisplay the awards table which will therefore have no entries.
- 'Close' will close the form. All awards shown in the table are already saved.

The row of data entry/display boxes comprises:

- **Seq**: This is the starting box for data entry. Enter a value eg, from the manual scoring form. The value is not checked at this time. Proceed using the Tab key.
- **Ent**: This is the second box for data entry. Enter a value eg, from the manual scoring form. Note that the value required is from Ent (a required column) and not Entrant (an optional column). Proceed using the Tab key.
- **Title**: This will show the Title of the entry (if available) specified by Seq and Ent. This box is not editable.
- **Score**: This will show the Score of the entry (if available) specified by Seq and Ent. This box is not editable.
- **Award**: On entry to this box (from **Ent**), the rows in the Entries worksheet are searched for the previously entered values of **Seq** and **Ent**. The search is not case sensitive.
  - If the combined values are not found, then a message is followed by clearing the data entry boxes and a return to the **Seq** box.
  - On finding the matching row, the **Title** and **Score** boxes are filled, and the current award value is displayed in the **Award** box. The 'Close' button is disabled so that the form cannot be closed before any **Award** has been saved. An award may be added; an existing award may be

edited; or an existing award may be deleted. Any text may be used. Proceed using the Tab key.

- After tabbing from the **Award** box, the tab order returns the user to the **Seq** box. When the **Seq** box is entered with an Entries data row selected, the data in the **Award** box is used to update the Entries worksheet. Confirmation is requested if a pre-existing award is to be changed or deleted.
- After any update of an award, the complete awards table is redisplayed, the 'Close' button is enabled and the data entry/display boxes are ready to use again.
- Although only 12 awards can be displayed in the table, there is no limit to the number of active awards which may be added.

After completion of data entry, close the form using the 'Close' button. The 'X' button is disabled with focus moved to the 'Close' button if 'Close' is enabled.

## Reporting:- Score Sheet

Click on the 'Score Sheet' button to create a manual score sheet from the content of the Entries sheet.

Any previous 'Score-Sheet' worksheet is deleted and a new sheet created. The page layout is Landscape.

The prior checks and sorting of the Entries worksheet data are the same as shown in the section above 'Sorting before Scoring'. Steps 1-7 are run and any event title is recovered. The report is aborted on any errors.

The columns on the score sheet are:

- Seq (sequence number)
- Ent (representing entrant)
- Entrant (or no data is shown if the optional reserved column header is not found in the Entries worksheet)
- a '|' column separator
- Title (with word wrapping to ensure no visual loss of data)
- Photographer (or no data is shown if the optional reserved column header is not found in the Entries worksheet)
- a '|' column separator
- Score (a box outline is shown for the cell)
- Award (or no data is shown if the optional reserved column header is not found in the Entries worksheet)

The rows are in the same order as used during scoring.

The Score column boxes will be blank before scoring and filled after scoring.

The Award column will show data if that has been entered on the Entries worksheet after scoring either manually or via the Awards edit form.

The worksheet can be saved as a pdf (Excel 2010 and later), printed, or printed to a pdf writer for onward distribution. When output in print format, each page has a header of the event title and a footer showing the page number and total pages.

## Reporting:- Results Sheets

Click on the 'Results Sheets' button to create a histogram report, a summary report and a detail report from the content of the Entries sheet.

Any previous 'Histogram', 'Results-Summary' or 'Results-Detail' worksheets are deleted and new copies created. The page layouts are Portrait.

The prior checks and sorting of the Entries worksheet are the same as shown in the section above 'Sorting before Scoring', except for the sort order. Steps 1-7 are run and any event title is recovered. The reports are aborted on any errors.

The sort order is (1) Entrant (if available) or otherwise Ent, (2) Score, (3) Title. This places the data in blocks (ascending) by entrant, within which the Scores are in descending order, with Titles in ascending order for any same Score.

After all reports are complete (Histogram, Summary, Detail), the Histogram report is left visible, with a user message for acceptance.

Any of the report worksheets can be printed, saved as pdf (Excel 2010 or later), or printed to a pdf writer for onward distribution.

### Histogram Report

The histogram report shows the numbers of scores for each score level in descending order. For multi-judging, the maximum and minimum for a valid score depend on the number of judges and on the score range chosen as options. For a single judge with manual scoring, the permitted range is 0.5 to 20. Scores outside the valid range are counted separately, especially any zero scores for unmarked.

The main body of the histogram allows for up to 40 distinct score levels.

If there are any errors, omissions or the histogram overflows, then messages are added below the histogram.

### Summary Report

The summary report shows the event title and report name, followed by column headers.

The columns are

- Ent
- Entrant (or no data is shown if the optional reserved column header is not found in the Entries worksheet)
- Score ie, the total score for the entrant
- Placing

The row order is sorted in descending order of total score. The placings are calculated and added to the report, with any ties shown.

### Detail Report

The detail report shows the event title and report name followed by the individual entrants in blocks.

Each entrant block shows the Ent and the Entrant (if data available), followed by column headers and the data for that entrant.

The columns are

- Title
- Photographer (or no data is shown if the optional reserved column header is not found in the Entries worksheet)
- Score
- Award (or no data is shown if the optional reserved column header is not found in the Entries worksheet)

The row order is descending by Score, with ascending Title for same score.

The Score column boxes will be blank before scoring and filled after scoring. The Award column will show data if that has been manually entered on the Entries worksheet after scoring.

The total score, as in the summary report, is appended to the end of each entrant block.

Entrant blocks are paginated to minimise page overflows.

## Appendix

### Notes for programmers:

The scoring software has VBA code associated with the Workbook and the Startup sheet, with the five user forms (Awards, Config, HandSet Test, HeldBackImages, Scoring), and code in two modules. None of these can be copied between workbooks.

The Startup sheet is protected from user input by a statement in the Workbook\_Open routine. This can be commented out for maintenance.

The system options are stored on the Startup sheet in rows 23-24. The font is in white so that the values are invisible. The font colour is set in a Module 1 constant and can be changed if required for maintenance.

There is no VBA code associated with the other worksheets. A replacement Entries worksheet can be copied in from another source if required.

No software can be completely tested. While many possible errors have been anticipated with alerts issued, the VBA code may:

- Produce an error message
  - Click debug and note the problem
- Enter an endless loop
  - Abort Excel using the Task Manager
  - Open a blank workbook with Excel
  - Increase security level to turn off macros
  - Rerun the scoring software workbook and debug manually.

Please report any errors found.