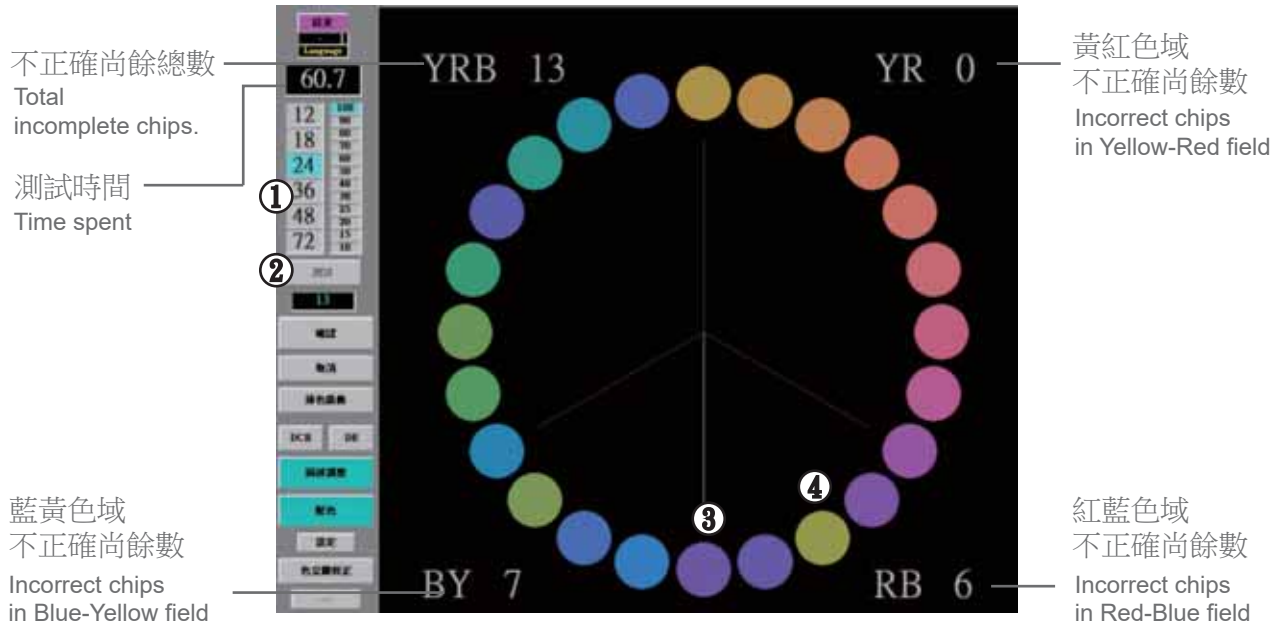


色環排列 Arrange Hue ring

視覺正常者30-50秒即可將一24色色環排列完成
如排列延時或排列錯誤，不適合從事色彩相關行業

People with normal visual function should be able to complete a 24-color hue ring
in 30~50 seconds without error or overtime.

Otherwise, this person should be unqualified to work in color related position.



操作步驟：

1. 選擇色環數目
2. 按下 **測試**
(系統即將色環打亂)
(黃紅藍三色為基準在固定位置)
3. 點選要移動的色塊
(會出現一條白線表示待移動)
(如不移動可點空白位置取消)
4. 點選目的位置插入 (兩色中間)

Test process:

1. Select hue-ring quantity.
2. Click **TEST** button.
The hue ring would be disrupted. But positions of basic yellow, red and blue chips will be fixed.
3. Click target chip to select it. A white line will target the chip, which means the chip is selected.
Click any empty space to cancel the selection.
4. Click the position you want to insert the chip into.
It should be between two chips.

小提示 Tips:

順時鐘排列，先將最接近第一個黃色的顏色移至旁邊；再找與之最相近的顏色，依序排列。

Arrange the chips in clockwise direction. Click the chip with most similar color to the basic yellow chip and place it next to it. And repeat the action.

辨色級數

Sensitive Test

視覺正常者需在5級(DE 2.5)下快速排列正確
色彩行業相關從業人員須能正確排列4級色棋 (DE1)

People with normal visual function should be able to complete the arrangement quickly in level DE 2.5.
People in color related position should complete level DE 1 correctly.



操作步驟:

1. 選擇測試項目
2. 選擇色差距離
3. 按下 **測試**
(系統即將色棋打亂)
(每排第一色為基準，不要移動)
4. 點選要移動的色塊
(上方出現一白點表示待移動)
5. 點選目的位置兩色對調
6. 排列完成後點 **確認** 查看答案
紅點表示位置錯誤

其他註解:

- A. 選擇排列色棋數
- B. 開始測試後點 **0-7**，可分行顯示
一排完成再點該按鈕排列下一排
點0顯示全部，1-6則對應各排
- C. 相面排序的顯示形狀
- D. 相面排序的濃度與彩度設定
- E. 色光排序的開始角度設定
- F. 歷史紀錄查看，點時間/名稱切換顯示

Test process:

1. Select test program
2. Select DE level
3. Click **TEST**. All chips will be disrupted randomly but the first one, which will be the standard for your reference.
4. Click the chip you want to move to.
A white point will appear on the top of the chip.
5. Click the chip you want to swap.
6. Click **Confirm** to check result. Red point will appear on the bottom of chips placed on incorrect position.

Notes:

- A. Select chips quantity of each color.
- B. When the test starts, click 1~6 to reveal a color you want to arrange first. And click another number to change color. Click 0 to show all color chips on screen.
- C. Change shape of field test.
- D. Set the depth and chrome grade of field test.
- E. Set the beginning angle of hue test.
- F. Historical record.
Click Time/Name button to switch info.

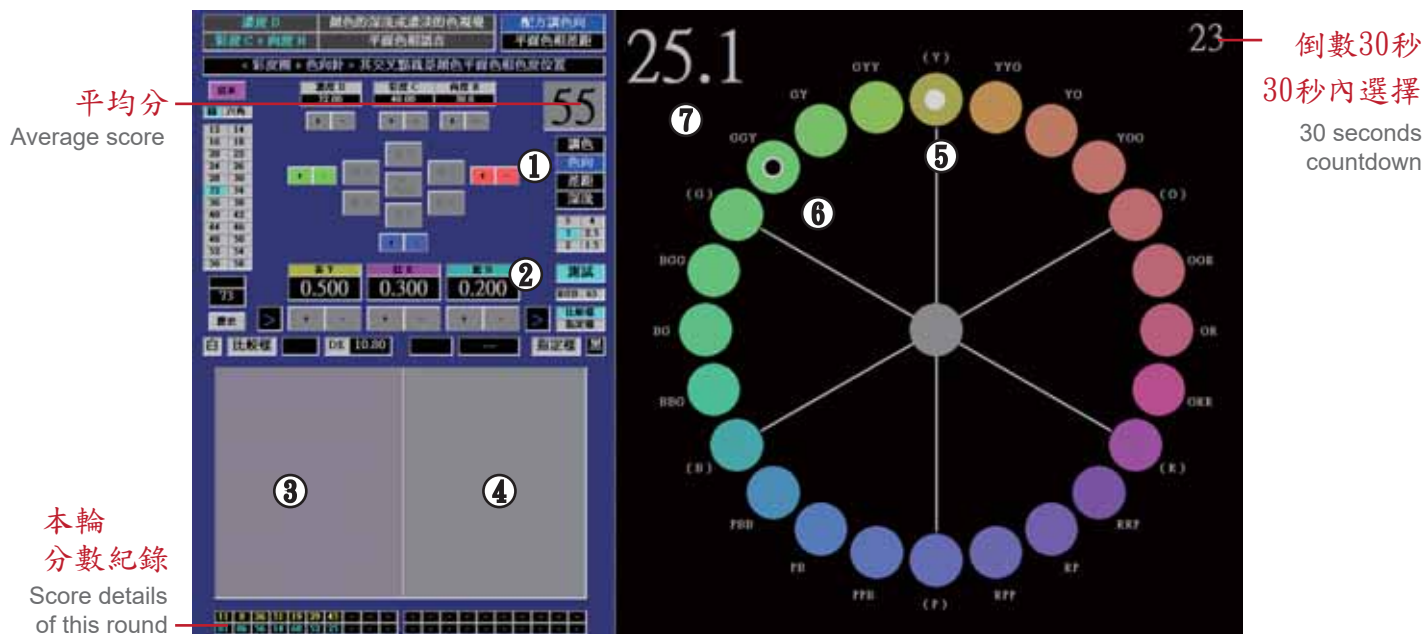
DCH 學習--認識色光偏向

DCH Learning - Know the hue direction

查看兩色對比下，指定樣的色光偏向
需練習至60分以上

Compare two chips and point the color direction from batch chip to specify chip.

Score above 60 points to pass the test.



操作步驟:

0. 由主畫面 **DCH** 按鈕進入本畫面
1. 選擇 **色向** 模式
2. 按 **測試** 開始
3. 左側色塊為比較樣
右側色塊為指定樣(標準樣)
比較兩個色塊，判斷指定樣色光偏向
4. 在右圖色環，點色光偏向 (白點)
5. 系統顯示正確的色光偏向 (黑點)
6. 顯示本次測試分數

Test process:

0. Click **DCH** button on main screen.
1. Select **HUE** test.
2. Click **TEST** to start.
3. Compare the colors on batch and specify chips.
And point the hue direction when adjusting
batch color to specify color.
4. Click the point on hue ring. (white point)
5. A black point will point the correct direction right away
6. Got scored.

DCH 學習--認識平面色差距離(色光)

DCH Learning - Know the color distance of two points on the same depth plant.

認識平面色差距離感覺，(等濃度；僅色光差距)

此處分數應達到60分以上方能通過及格

Practice and memorize color distances of any two point on a color plant, which all colors' depth are the same.

Score 60 points or above to pass the test.

平均分
Average score

本輪
分數紀錄
Score details of this round

同偏向
不同距離
Distance of this two chips.

操作步驟:

1. 選擇 **差距** 模式
2. 選擇使用者代碼
3. 點 **測試** 開始
4. 查看兩個色塊的色差距離
5. 選擇色差距離
6. 顯示正確色差
(亮的序號為測試者選擇的色差)
7. 顯示本次分數
8. 從第3步驟開始下組顏色測試

Test process:

1. Select **distance** test.
2. Select user code
3. Click **TEST**
4. Estimate the distance of batch and specify chips.
5. Click the distance number
6. Distance cell become blue to show correct number.
Blue serial code means the distance user had chose.
7. Show score.
8. Come back to step 3 to start next quiz.

DCH 學習--濃度色差距離辨別

DCH Learning - Identify depth distance of two color chips

認識濃度色差距離感覺，（此處無色光差距，僅濃度差）

此處分數應達到60分以上方能通過及格

Be aware of the depth distance between two colors. (No hue and chroma difference)

Users have to get 60 points or above to pass the test.

平均分
Average score

本輪分數紀錄
Score details of this round

同色不同濃度
Depth Distance of two chips.

操作步驟：

1. 選擇 **深淺** 模式
2. 選擇使用者代碼
3. 點 **測試** 開始
4. 點 淺/深 選擇指定樣濃度偏向
5. 查看兩個色塊的色差距離
6. 選擇色差距離
7. 顯示正確色差
(亮的序號為測試者選擇的色差)
8. 顯示本次分數
9. 從第3步驟重複，開始下組測試

Test process:

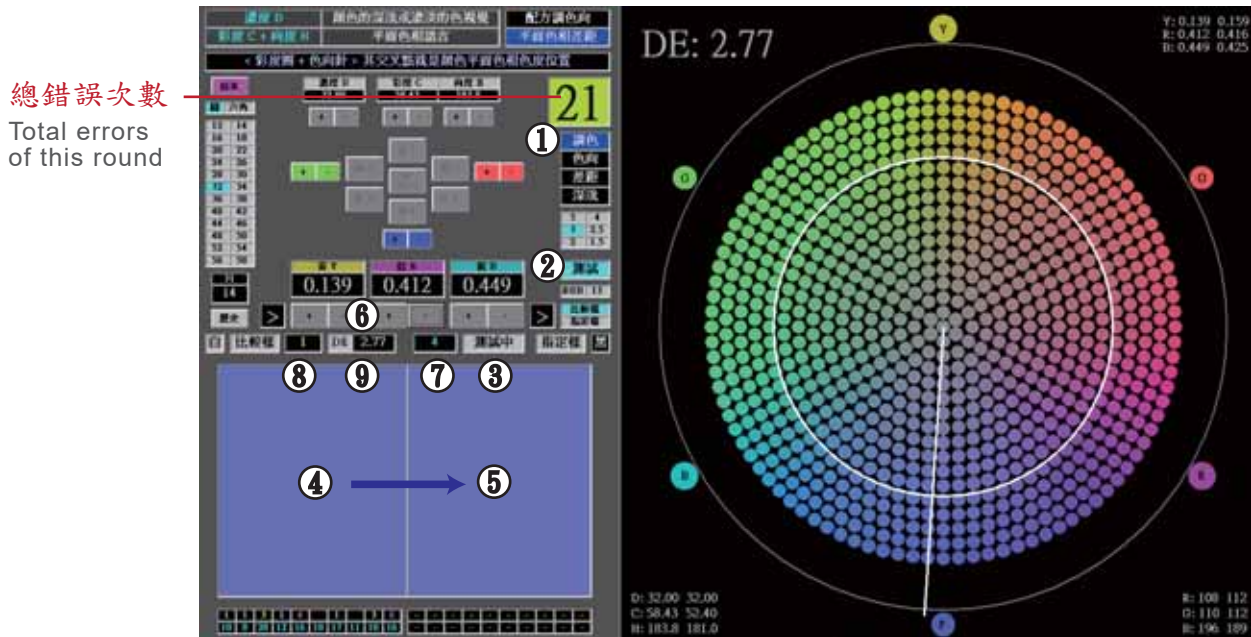
1. Select **Depth** test.
2. Select user code
3. Click **TEST**
4. Click 'Light' or 'Deep' to identify specify chip's depth when comparing to batch chip.
5. Estimate the depth distance of these two chips.
6. Click the distance number
7. Distance cell becomes blue to show correct number.
Blue serial code means the distance user had chose.
8. Show score
9. Come back to step 3 to start next quiz.

DCH學習--配方調向練習

DCH -- Recipe Adjustment Training

透過加減黃、紅、藍配方，快速學習判斷配方調整的正確方向，
已有配色經驗者可自我檢驗是否對某色系較不熟練存有盲點
此處應練習到一輪總錯誤次數在15次以下

Practice and learn to adjust recipe efficiently by adding or reducing the contents of yellow, red and blue in a recipe.
Skilled users can use this test to confirm their strength and weakness on each color direction.
Total errors should be lower than 15 times a round.



操作步驟：

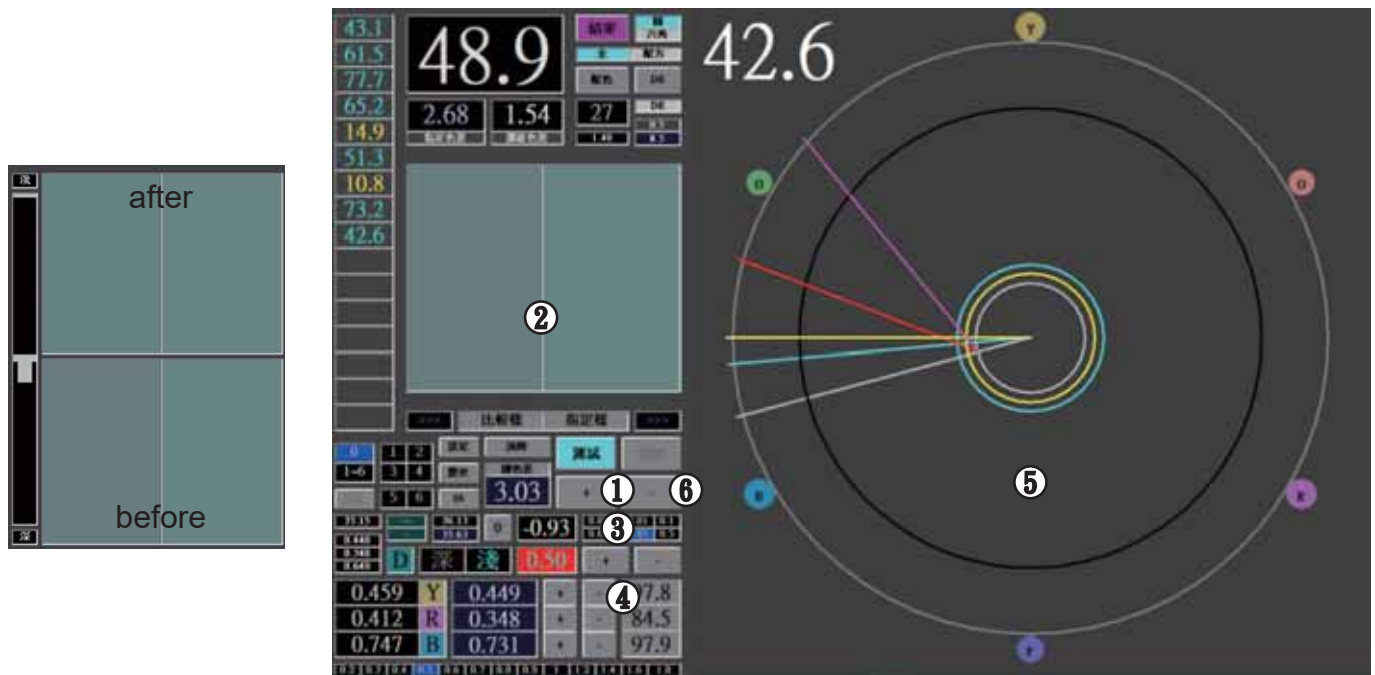
1. 選擇 **調色** 模式
2. 按 **測試** 開始
3. 此處顯示 **測試中** 表示已開始測試
4. 左側色塊為比較樣
5. 右側色塊為指定樣(標準樣)
6. 點 **+** **-** 按鈕調整黃紅藍色值
4處比較樣顏色會隨之變化，
需調成5處指定樣顏色
7. 調向正確時7處藍色數字會累計
8. 調向錯誤時8處黃色數字會累計
並亮紅警示
9. 調後色差低於 0.6 或 RGB小于2
即通過，自動開始下一組調整測試

Operation process:

1. Select **Recipe** test.
2. Click **Test** button.
3. Test has begun when this button turns blue.
4. Left chip is batch sample.
5. Right chip is specify sample.
6. Click **+** **-** button to adjust yellow, blue and red content of batch chip. Chip color will change immediately and user should try to make it approach to specify chip color.
7. If user's adjustment is reasonable, the blue number will increase to record this successful adjustment.
8. If user's adjustment is incorrect, the yellow number will increase and get red alarm.
9. When color distance is lower than 0.6, this quiz is passed and start next one automatically.

色彩描述法

Describing practice - Fixing color by describing hue direction and distance



操作步驟:

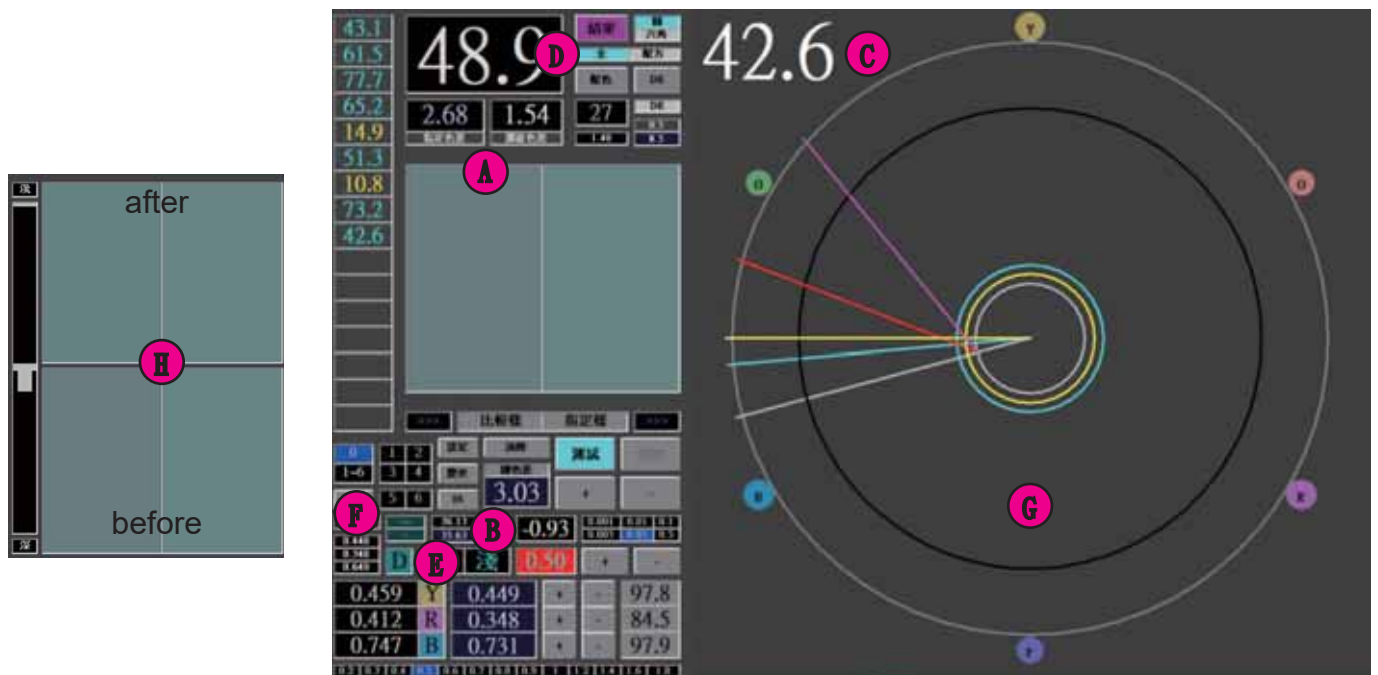
0. 主畫面點 **描述調整** 進入本畫面
1. 點 **測試** 開始
(會調出使用者名稱及組合選擇視窗)
(詳見設定畫面)
2. 查看兩個色塊，左側為比較樣(調整樣)
右側為指定樣(固定目標色樣)
3. 按 **+** **-** 按鈕調整總色差距離
4. 按 **+** **-** 按鈕調整濃度距離
(如選擇無濃度差跳過此步)
5. 點選色光偏向
6. 按下 **確認** 按鈕，查看正確答案
左側視窗為根據描述調整前後的色塊
7. 從第1步重複，直到完成本輪測試

Test process:

0. Click **Describing practice** button in main screen to enter this test.
1. Click **TEST** button to start the test.
System will request user to input username.
2. Left chip is batch sample, and right one is specify sample.
3. Click **+** **-** button to set up estimated color distance.
4. If user consider that there's depth difference between these two chips, click **+** **-** button to estimate depth distance.
5. Choose the hue direction of batch color comparing to specify color.
6. Click **confirm** button to check answer. Left window shows color comparison before and after adjustment
7. Come back to step 1 and begin next quiz until the end of round.

色彩描述法

Describing practice - Fixing color by describing hue direction and distance



畫面註解：

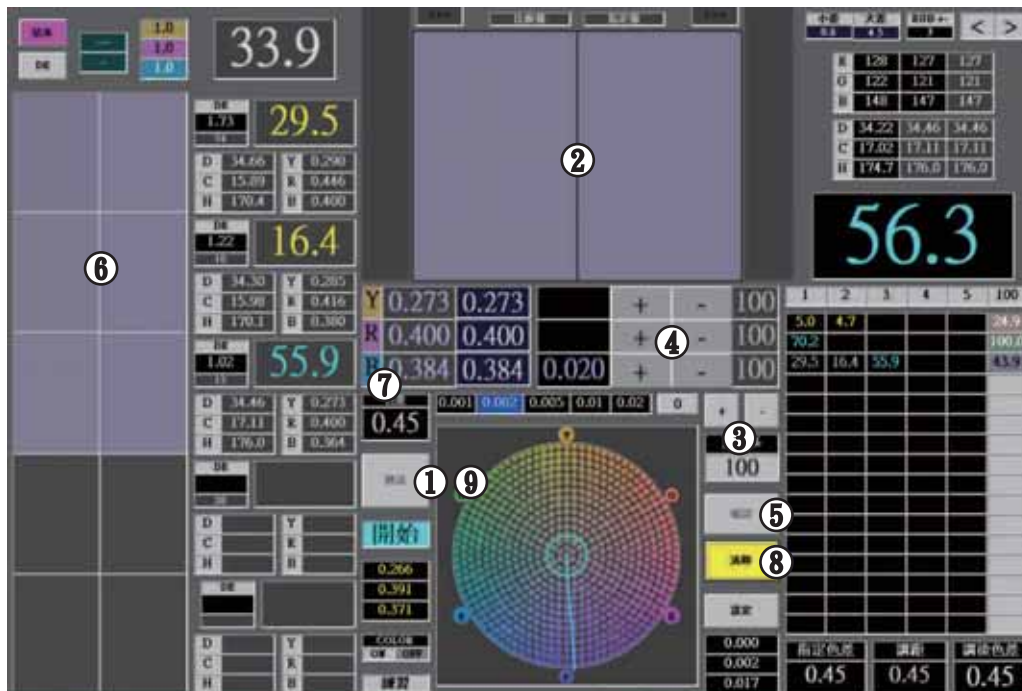
- A. 調整前的色差(正確總色差值)
右側為描述調整後的色差
- B. 正確的濃度差距
- C. 本次調整分數
- D. 本輪目前平均分數
分數需達到33.3以上方及格
- E. 測試前點亮 **D**，該輪測試有濃度差
點灰則無濃度差，僅色光差
- F. 此處顯示正確配方
- G. **紅色指針**：受試者選擇的色光偏向
品紅色指針：正確的色光偏向
白色色度位：比較樣位置
藍色色度位：調整後位置
黃色色度位：正確位置
- H. 上方為調整後；下方為調整前

Notes:

- A. Left field is original distance between two chips, and right one shows distance after adjustment.
- B. Real depth distance.
- C. Score of this adjustment
- D. Average score of this round.
User must score 33.3 or above to pass the test.
- E. Before the test starts, users can click **D** to eliminate depth difference in test. It will become easier level since users only have to judge hue and chroma distance between two color chips.
- F. Here's the recipe of specify chip
- G. Red hand: user's estimated hue direction
Pink hand: Correct hue direction
White cross point: Color position of batch chip
Blue cross point: Color position of batch chip after adjusting
Yellow cross point: Color position of specify chip
- H. Above field shows the comparison before adjusting. Below one is the result after adjusting.

擬真修色訓練

Color matching – Color adjustment simulated training



操作步驟：

0. 主畫面點 **配色** 進入本畫面
1. 點 **測試** 開始
2. 查看兩個色塊，左側為比較樣(調整)
右側為指定樣(固定目標色樣)
3. 按 **+** **-** 按鈕調整配方整體濃度
4. 按 **+** **-** 按鈕調整各色料配方
5. 調整完成按 **確認** 按鈕
6. 左側為調整前的色塊、配方、色差
7. 中間顯示調後的色塊、配方、色差
從第2步重複；直到對色通過
(色差低於0.6；或RGB小於2)
8. 通過或五次結束後，按 **清除**
9. 按 **測試** 開始下組調整

Test process:

0. Click **Color Matching** button in main screen to enter this test. System will request user to input username.
1. Click **TEST** button to start the test.
2. Compare the color difference between two chips.
Left chip is batch sample & right one is specify sample.
3. Click **+** **-** button to adjust the recipe depth.
4. Click **+** **-** button to adjust primary colors content.
5. Click **Confirm** button to complete adjustment and check answer.
6. Left field shows the chip, recipe and distance before adjusting.
7. Middle field shows the chip, recipe and distance after adjusting. Users have to repeat above action until passing the test. Passing standard is distance's lower than 0.6, or RGB value's lower than 2.
8. When users pass the test or adjust recipe 5 times, this quiz will end and click **clean** to start next one.
9. Click **TEST** to start next quiz

擬真修色訓練

Color matching – Color adjustment simulated training



畫面註解：

- A. 該組調色目前平均分
下方為每次分數及每組色差
- B. 指定樣正確配方
- C. 最後一組調色的正確調幅
- D. 測試前點亮練習，可直接看到答案
- E. 選擇 按鈕的調幅
- F. 點 > 可展開查看歷史紀錄
- G. 顯示調色色差範圍
- H. 本輪測試目前平均分即每次分數
1次通過，平均分+30分；2次+20；
3次+10；4次5；5次無加分
平均分需達33.3以上方算及格
- I. 顯示兩色塊RGB值差距，因螢幕顯色緣故，如RGB在2以內，色差卻還在0.6 以上，系統會認為已難判斷差距直接通過（此處會亮黃）

Notes:

- A. Real-time average score of this quiz. Below shows score and color distance of each adjustment.
- B. Recipe of specify chip.
- C. Correct adjusting value of last adjustment.
- D. Click 'Practice' button before start a quiz. Recipe of specify chip will appear immediately after quiz begins
- E. Choose value of button.
- F. Click > to review historical record.
- G. Distance range
- H. Real-time average score of this round. User will get additional score if completing the quiz in first to fourth time of adjustment. 1st time :30. 2nd time:20. 3rd time:10. 4th time: 5. If users could score 33.3 or more consistency in one round, he/she should be qualified for color matching
- I. RGB distance between 2 chips. Due to the RGB model issue, color on screen will be too close to distinguish when RGB distance is lower than 2. So the quiz will be ended and scored immediately.
(Field turns into yellow)

軟體說明-使用者名稱設定

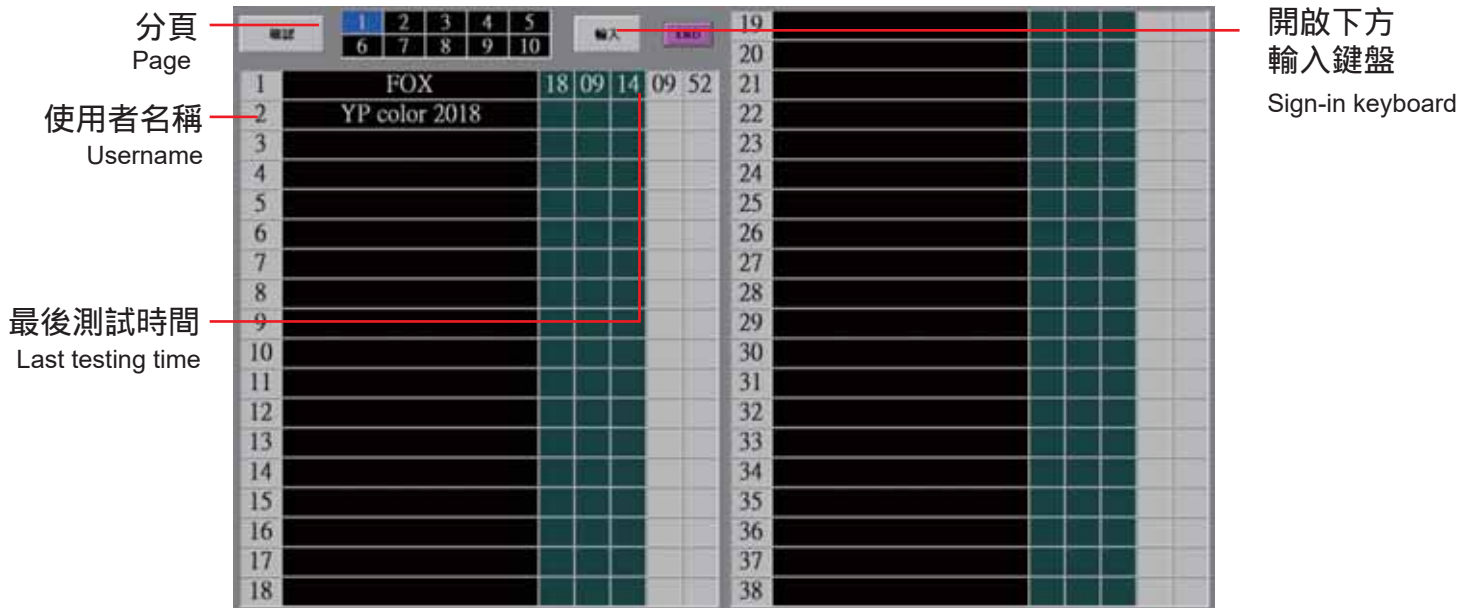
Software instruction – Input username

進入測試畫面後，會先彈出選擇使用者名稱畫面如下

點選使用者序號後，即回到該測試畫面

When users enter into a test, a username key-in page will pop up.

User can click 'Input' to key in username or click 'confirm' to skip this step immediately.



點 **輸入** 可開啟下方輸入鍵盤，輸入字符後點亮 **save** 再點選序號及可存入

Click 'Input' to open screen keyboard.

Key in username, and then click the 'save' button to turn on saving function. Choose a number to save the username.

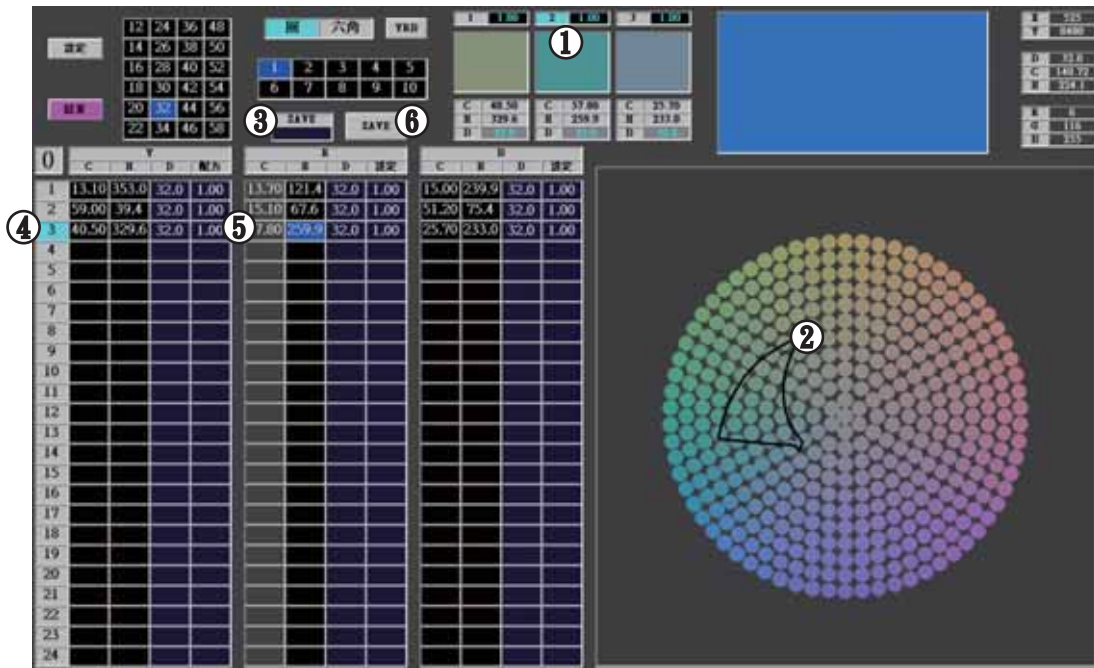


軟體說明-色料組合設定

Software instruction – Primary colors setup

在描述調整與擬真修色畫面的 設定 可開啟以下畫面
在測試開始前進入選擇序號，該次測試就會使用該組合混色範圍

Click 'Setting' button in sensitive test or color matching test to enter into setup page to identify primary colors for testing.
Choose a number and the test will start within this primary color combination.



設定方法：

1. 點亮序號
2. 在色相面中選擇色
(黑色線即此三支色料可混色範圍)
3. 點亮 save 欄位
4. 點選存入位置序號
5. 輸入濃度及力度、配方
6. 點 按鈕存檔
(如 鎖住可點一下旁邊的 D 解鎖)

Setup process:

1. Click a number to turn light
2. Choose three colors in the color chart. Black lines shows the range that these three colors could be mixed for.
3. Click the 'save' button
4. Click the number that users want to save the combination.
5. Input depth, strength and recipe.
6. Click 'save' button to save into system.
If 'save' button is locked, click the letter 'D' next to 'save' button to unlock the button.