



THE UNIVERSITY OF TEXAS AT ARLINGTON

Project Part 4 Test Report

November 19

2015

Team 3 Members: Anuj Rakheja, Arjun
Punabhai Vekariyam, Neeraj Mishra, Purn Prem
Kumar, Sneha Suhas Chitre

ADVDisplay.updateDisplay
JUnit test Report

Contents

1) Source code & JUnit test code –	2
2) PowerPoint slides –	2
3) Snapshots -	2
Screen snapshots of each of the 13 test case snap shots as follows:	2
3.1 Test Case 1 screen snap shot	2
3.2 Test Case 2 screen snap shot	3
3.3 Test Case 3 screen snap shot	3
3.4 Test Case 4 screen snap shot	4
3.5 Test Case 5 screen snap shot	4
3.6 Test Case 6 screen snap shot	5
3.7 Test Case 7 screen snap shot	5
3.8 Test Case 8 screen snap shot	6
3.9 Test Case 9 screen snap shot	6
3.10 Test Case 10 screen snap shot	7
3.11 Test Case 11 screen snap shot	7
3.12 Test Case 12 screen snap shot	8
3.13 Test Case 13 screen snap shot	8
4) JaCoCo Coverage Reports & JUnit test results –	9
5) Test results-	10
6) Bugs found/code changes made	10

ADVDisplay.updateDisplay JUnit test Report

1) Source code & JUnit test code –

Both source code and Junit test code is placed in attachments.

Source code is attached as SoftwareTesting_Project_Part4_Code.zip

JUnit test case can be found in

SoftwareTesting_Project_Part4_Code.zip\ST_P_4\src\ADV\ADVDisplayTest.java

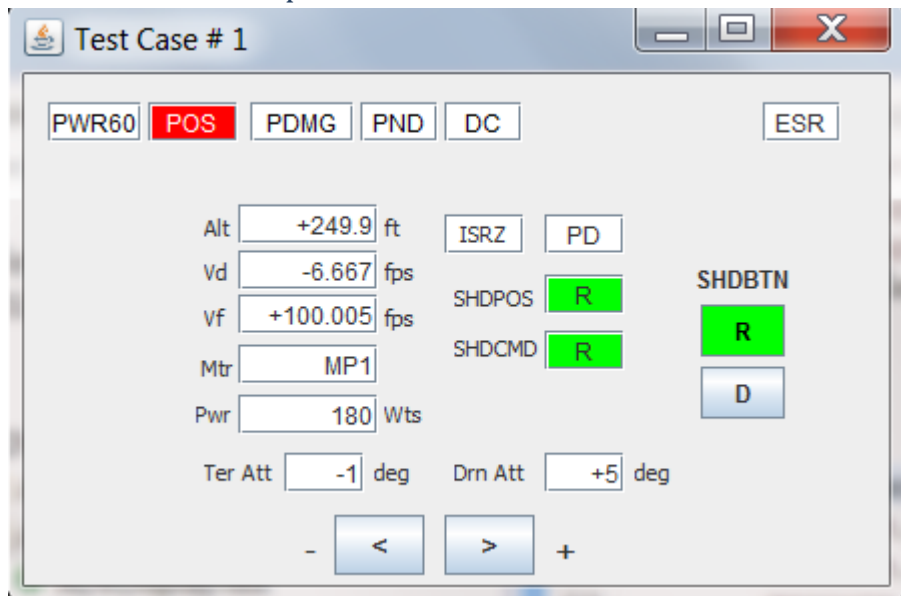
2) PowerPoint slides –

We used the class provided slides.

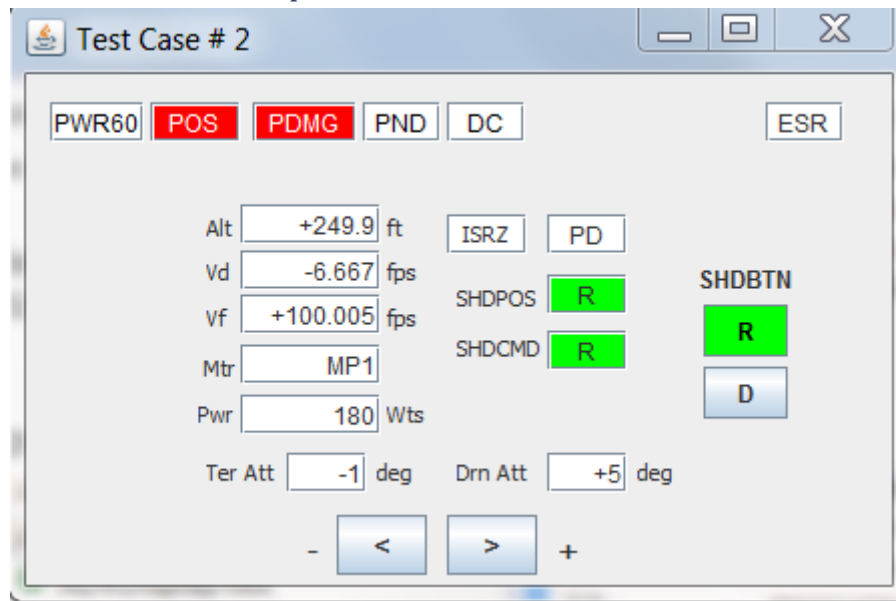
3) Snapshots -

Screen snapshots of each of the 13 test case snap shots as follows:

3.1 Test Case 1 screen snap shot

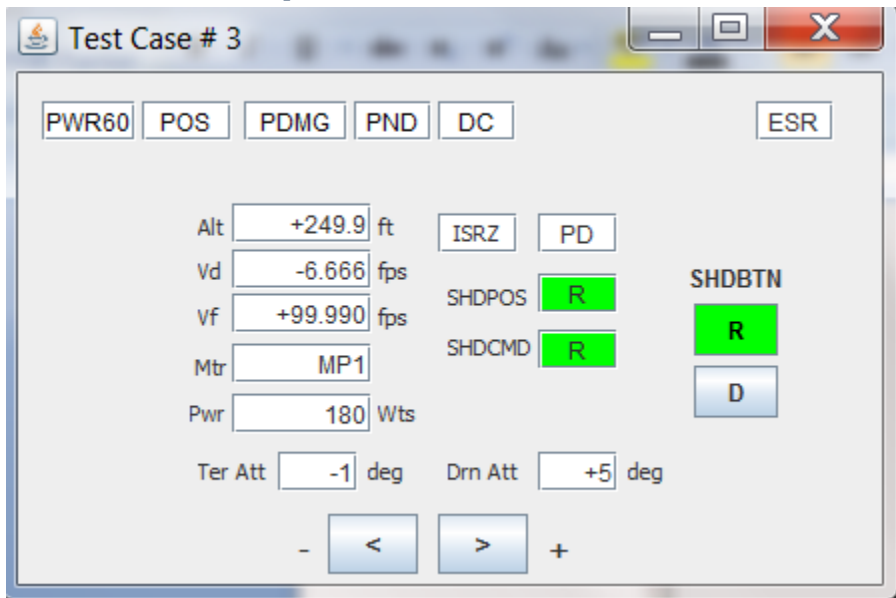


3.2 Test Case 2 screen snap shot



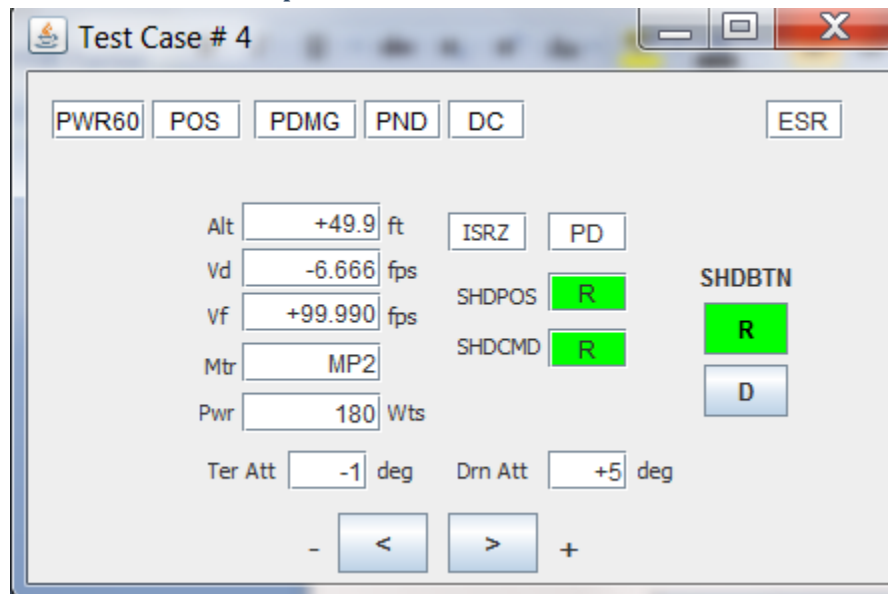
The screenshot shows the 'Test Case # 2' window. At the top, there are buttons for 'PWR60', 'POS' (highlighted in red), 'PDMG' (highlighted in red), 'PND', 'DC', and 'ESR'. Below these, the interface is organized into several sections. On the left, there are input fields for 'Alt' (+249.9 ft), 'Vd' (-6.667 fps), 'Vf' (+100.005 fps), 'Mtr' (MP1), and 'Pwr' (180 Wts). To the right of these are buttons for 'ISRZ' and 'PD'. Further right are two green buttons labeled 'R' for 'SHDPOS' and 'SHDCMD'. On the far right is a vertical stack of buttons: a green 'R' button for 'SHDBTN' and a blue 'D' button below it. At the bottom, there are input fields for 'Ter Att' (-1 deg) and 'Drn Att' (+5 deg), and a set of navigation buttons: a minus sign, a left arrow, a right arrow, and a plus sign.

3.3 Test Case 3 screen snap shot



The screenshot shows the 'Test Case # 3' window. The top buttons are 'PWR60', 'POS', 'PDMG', 'PND', 'DC', and 'ESR'. The layout of the interface is identical to Test Case # 2. The 'Alt' field is +249.9 ft, 'Vd' is -6.666 fps, 'Vf' is +99.990 fps, 'Mtr' is MP1, and 'Pwr' is 180 Wts. The 'SHDPOS' and 'SHDCMD' buttons are green with 'R'. The 'SHDBTN' button is green with 'R', and the 'D' button is blue. The 'Ter Att' is -1 deg and 'Drn Att' is +5 deg. The navigation buttons at the bottom are the same as in Test Case # 2.

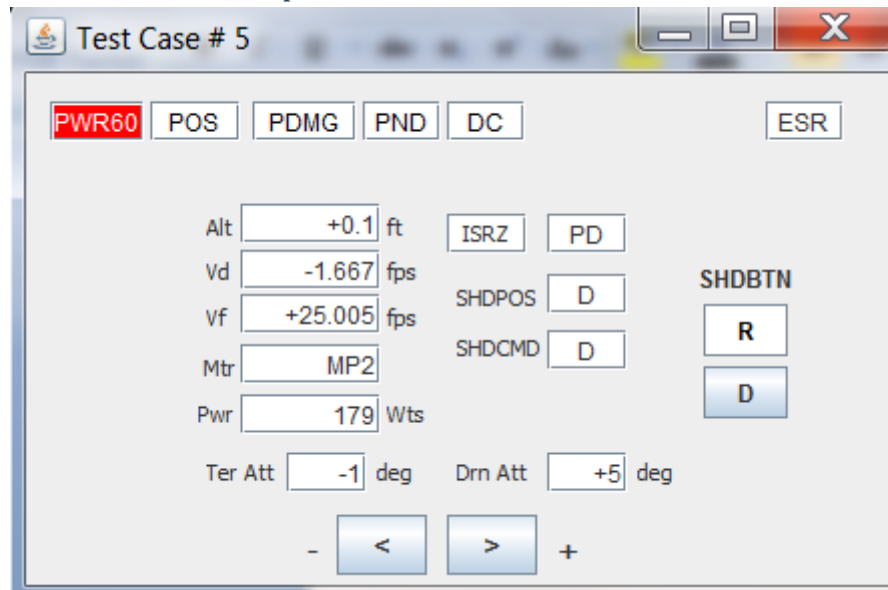
3.4 Test Case 4 screen snap shot



The screenshot shows the 'Test Case #4' window. At the top, there are buttons for 'PWR60', 'POS', 'PDMG', 'PND', 'DC', and 'ESR'. Below these, the 'Alt' field is set to '+49.9 ft', 'Vd' to '-6.666 fps', 'Vf' to '+99.990 fps', 'Mtr' to 'MP2', and 'Pwr' to '180 Wts'. To the right, 'ISRZ' and 'PD' are buttons, and 'SHDPOS' and 'SHDCMD' are green buttons with 'R'. Further right, 'SHDBTN' is a green button with 'R' and a blue button with 'D'. At the bottom, 'Ter Att' is '-1 deg' and 'Drn Att' is '+5 deg'. Navigation buttons include '-', '<', '>', and '+'. The window has standard OS controls (minimize, maximize, close) in the title bar.

Field	Value
Alt	+49.9 ft
Vd	-6.666 fps
Vf	+99.990 fps
Mtr	MP2
Pwr	180 Wts
Ter Att	-1 deg
Drn Att	+5 deg

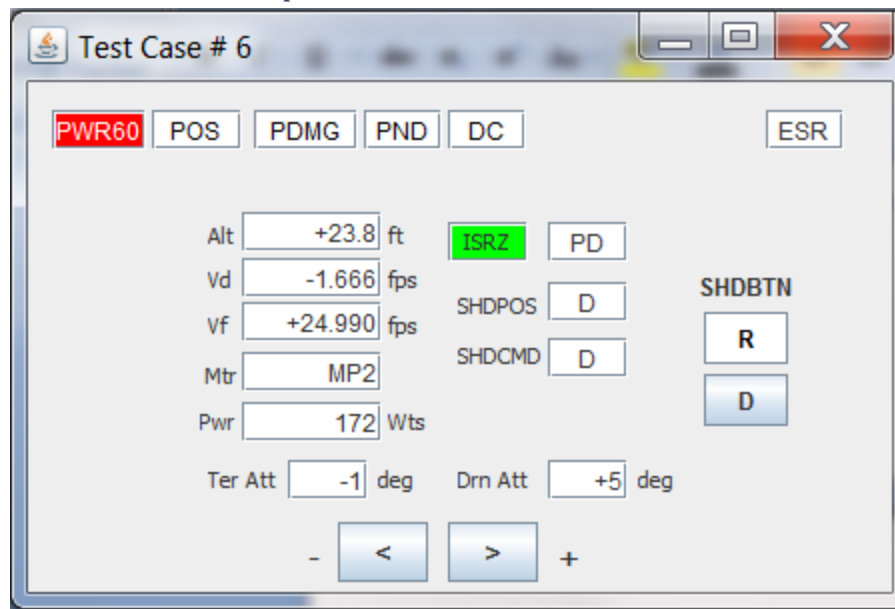
3.5 Test Case 5 screen snap shot



The screenshot shows the 'Test Case #5' window. At the top, there are buttons for 'PWR60', 'POS', 'PDMG', 'PND', 'DC', and 'ESR'. The 'PWR60' button is highlighted in red. Below these, the 'Alt' field is set to '+0.1 ft', 'Vd' to '-1.667 fps', 'Vf' to '+25.005 fps', 'Mtr' to 'MP2', and 'Pwr' to '179 Wts'. To the right, 'ISRZ' and 'PD' are buttons, and 'SHDPOS' and 'SHDCMD' are buttons with 'D'. Further right, 'SHDBTN' has a button with 'R' and a blue button with 'D'. At the bottom, 'Ter Att' is '-1 deg' and 'Drn Att' is '+5 deg'. Navigation buttons include '-', '<', '>', and '+'. The window has standard OS controls (minimize, maximize, close) in the title bar.

Field	Value
Alt	+0.1 ft
Vd	-1.667 fps
Vf	+25.005 fps
Mtr	MP2
Pwr	179 Wts
Ter Att	-1 deg
Drn Att	+5 deg

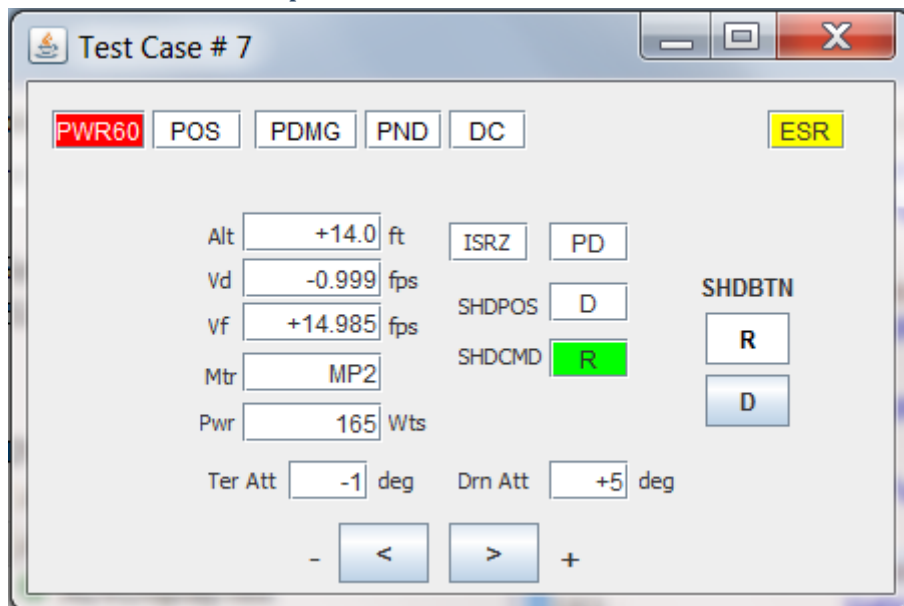
3.6 Test Case 6 screen snap shot



The screenshot shows the 'Test Case # 6' window. At the top, there are buttons for 'PWR60' (highlighted in red), 'POS', 'PDMG', 'PND', 'DC', and 'ESR'. Below these are input fields for 'Alt' (+23.8 ft), 'Vd' (-1.666 fps), 'Vf' (+24.990 fps), 'Mtr' (MP2), and 'Pwr' (172 Wts). To the right of these fields are buttons for 'ISRZ' (highlighted in green), 'PD', 'SHDPOS' (D), 'SHDCMD' (D), and 'SHDBTN' (R and D). At the bottom, there are 'Ter Att' (-1 deg) and 'Drn Att' (+5 deg) fields, and navigation buttons (-, <, >, +).

Parameter	Value	Unit
Alt	+23.8	ft
Vd	-1.666	fps
Vf	+24.990	fps
Mtr	MP2	
Pwr	172	Wts
Ter Att	-1	deg
Drn Att	+5	deg

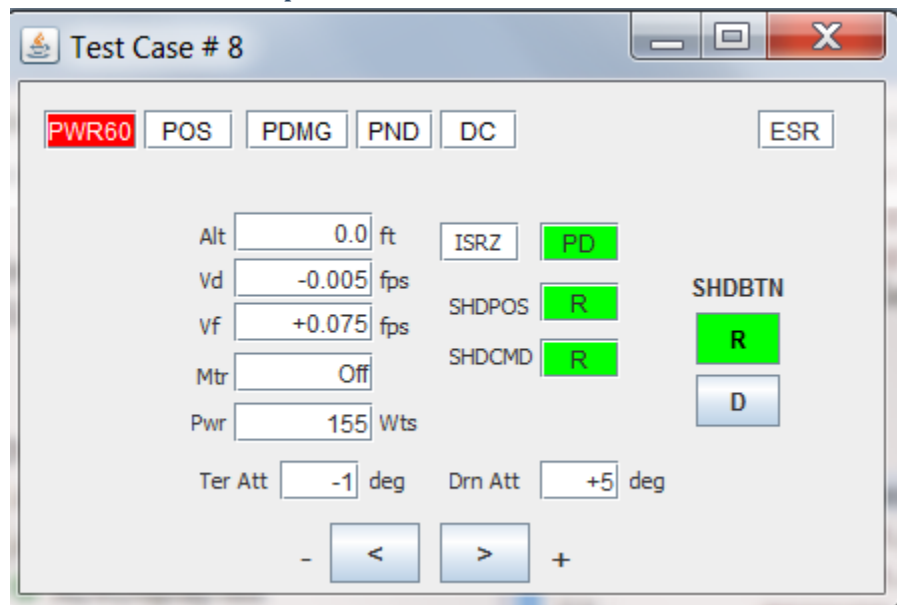
3.7 Test Case 7 screen snap shot



The screenshot shows the 'Test Case # 7' window. At the top, there are buttons for 'PWR60' (highlighted in red), 'POS', 'PDMG', 'PND', 'DC', and 'ESR' (highlighted in yellow). Below these are input fields for 'Alt' (+14.0 ft), 'Vd' (-0.999 fps), 'Vf' (+14.985 fps), 'Mtr' (MP2), and 'Pwr' (165 Wts). To the right of these fields are buttons for 'ISRZ', 'PD', 'SHDPOS' (D), 'SHDCMD' (R, highlighted in green), and 'SHDBTN' (R and D). At the bottom, there are 'Ter Att' (-1 deg) and 'Drn Att' (+5 deg) fields, and navigation buttons (-, <, >, +).

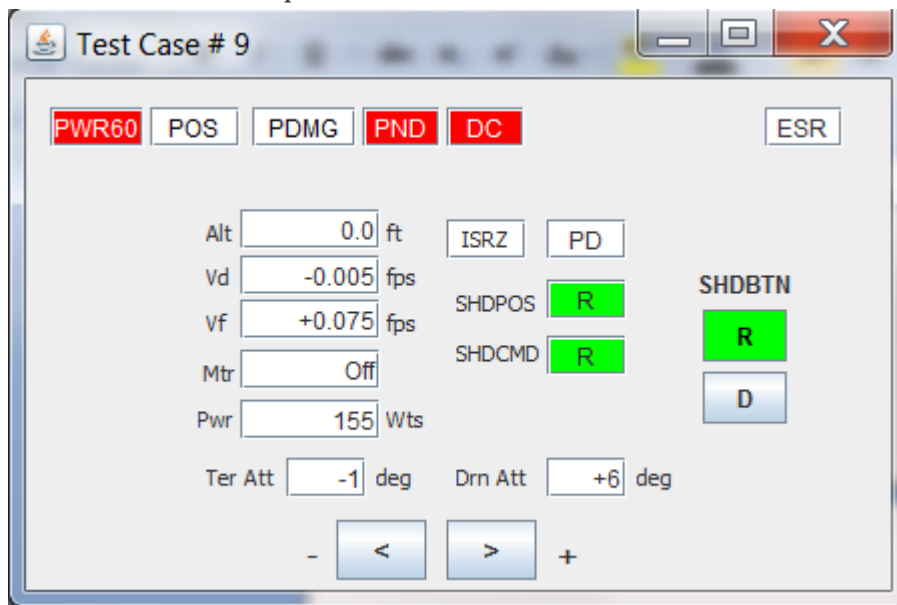
Parameter	Value	Unit
Alt	+14.0	ft
Vd	-0.999	fps
Vf	+14.985	fps
Mtr	MP2	
Pwr	165	Wts
Ter Att	-1	deg
Drn Att	+5	deg

3.8 Test Case 8 screen snap shot



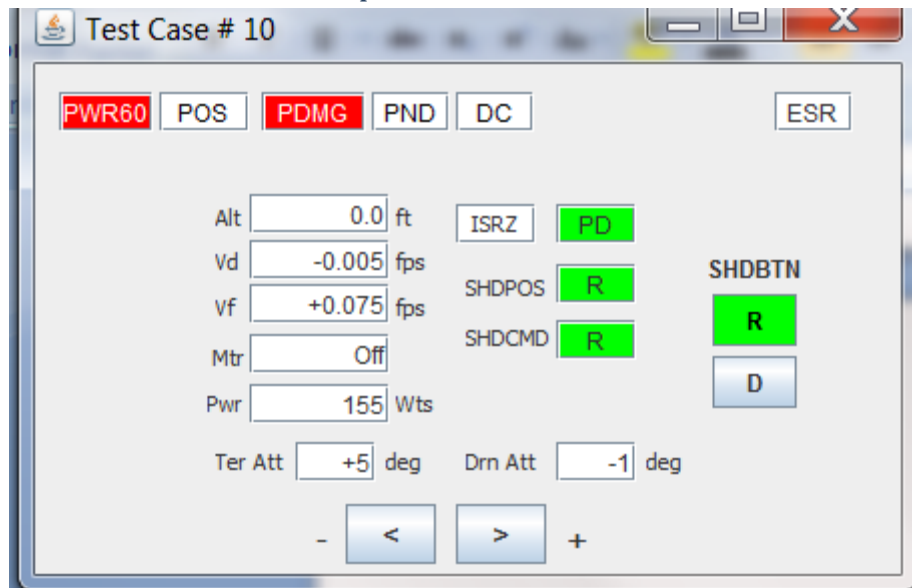
The screenshot shows the 'Test Case # 8' window. At the top, there are buttons for 'PWR60' (highlighted in red), 'POS', 'PDMG', 'PND', 'DC', and 'ESR'. Below these are input fields for 'Alt' (0.0 ft), 'Vd' (-0.005 fps), 'Vf' (+0.075 fps), 'Mtr' (Off), and 'Pwr' (155 Wts). To the right of these fields are buttons for 'ISRZ' (PD), 'SHDPOS' (R), 'SHDCMD' (R), and 'SHDBTN' (R). Below the input fields are 'Ter Att' (-1 deg) and 'Drn Att' (+5 deg) fields. At the bottom are navigation buttons: '-', '<', '>', and '+'. The 'SHDBTN' button is highlighted in green.

3.9 Test Case 9 screen snap shot



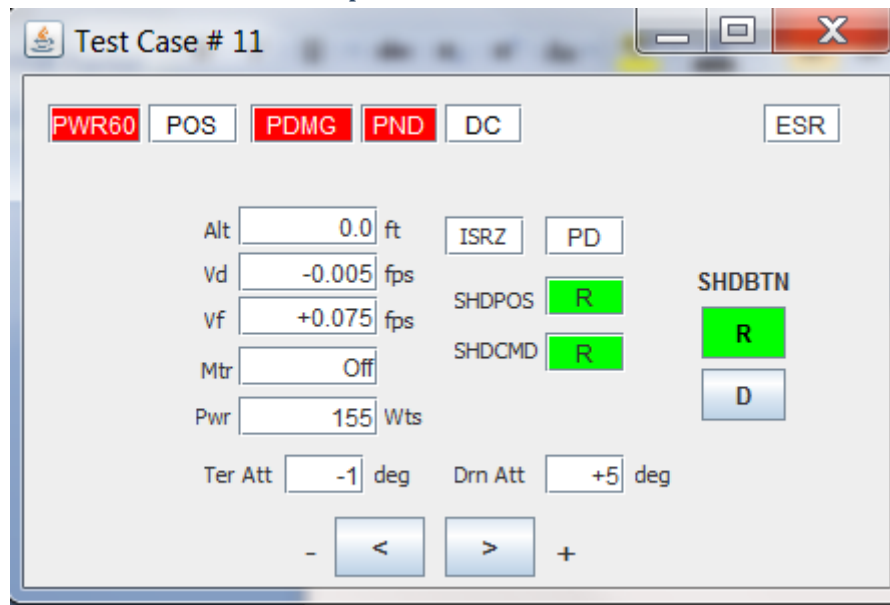
The screenshot shows the 'Test Case # 9' window. At the top, there are buttons for 'PWR60', 'POS', 'PDMG', 'PND' (highlighted in red), 'DC' (highlighted in red), and 'ESR'. Below these are input fields for 'Alt' (0.0 ft), 'Vd' (-0.005 fps), 'Vf' (+0.075 fps), 'Mtr' (Off), and 'Pwr' (155 Wts). To the right of these fields are buttons for 'ISRZ' (PD), 'SHDPOS' (R), 'SHDCMD' (R), and 'SHDBTN' (R). Below the input fields are 'Ter Att' (-1 deg) and 'Drn Att' (+6 deg) fields. At the bottom are navigation buttons: '-', '<', '>', and '+'. The 'SHDBTN' button is highlighted in green.

3.10 Test Case 10 screen snap shot



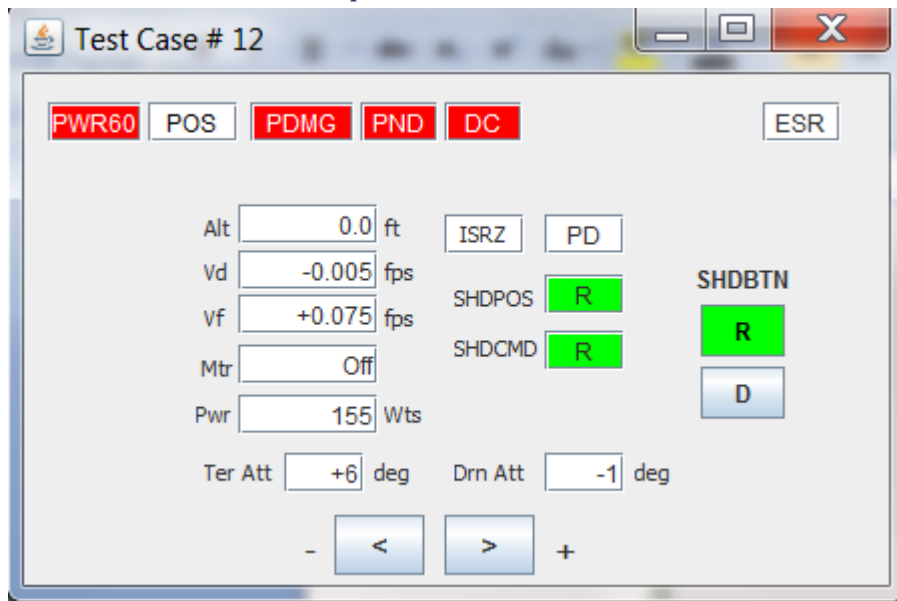
The screenshot shows a control panel for 'Test Case # 10'. At the top, there are five buttons: 'PWR60' (red), 'POS' (white), 'PDMG' (red), 'PND' (white), and 'DC' (white). On the far right is an 'ESR' button (white). Below these are several input fields and buttons. On the left, 'Alt' is set to '0.0 ft', 'Vd' to '-0.005 fps', 'Vf' to '+0.075 fps', 'Mtr' to 'Off', and 'Pwr' to '155 Wts'. In the center, 'Ter Att' is '+5 deg' and 'Drn Att' is '-1 deg'. To the right of these are 'ISRZ' (white) and 'PD' (green). Below 'ISRZ' are 'SHDPOS' (green with 'R') and 'SHDCMD' (green with 'R'). On the far right, under the heading 'SHDBTN', there is a green button with 'R' and a white button with 'D'. At the bottom, there are three buttons: a minus sign, a left arrow, and a right arrow, followed by a plus sign.

3.11 Test Case 11 screen snap shot



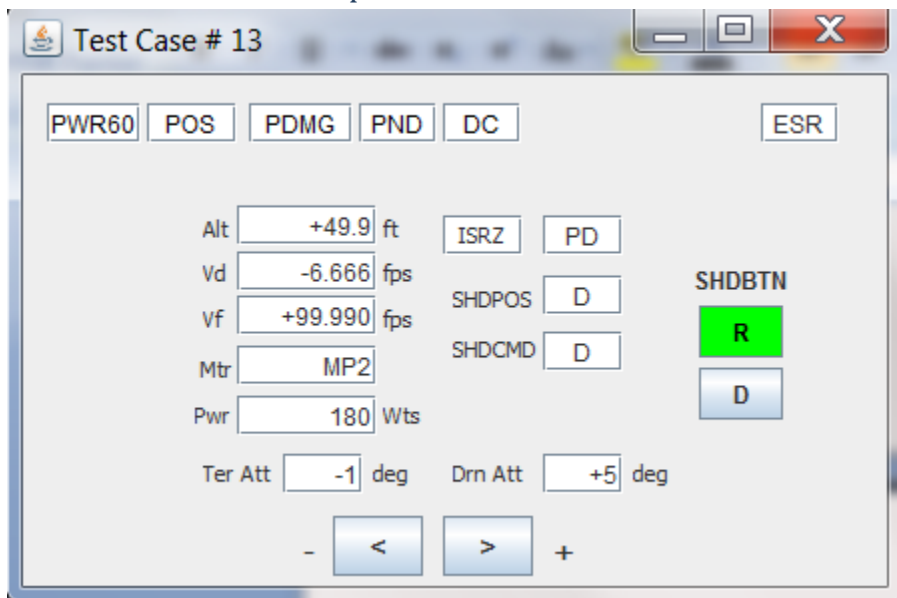
The screenshot shows a control panel for 'Test Case # 11'. At the top, there are five buttons: 'PWR60' (red), 'POS' (white), 'PDMG' (red), 'PND' (red), and 'DC' (white). On the far right is an 'ESR' button (white). Below these are several input fields and buttons. On the left, 'Alt' is set to '0.0 ft', 'Vd' to '-0.005 fps', 'Vf' to '+0.075 fps', 'Mtr' to 'Off', and 'Pwr' to '155 Wts'. In the center, 'Ter Att' is '-1 deg' and 'Drn Att' is '+5 deg'. To the right of these are 'ISRZ' (white) and 'PD' (white). Below 'ISRZ' are 'SHDPOS' (green with 'R') and 'SHDCMD' (green with 'R'). On the far right, under the heading 'SHDBTN', there is a green button with 'R' and a white button with 'D'. At the bottom, there are three buttons: a minus sign, a left arrow, and a right arrow, followed by a plus sign.

3.12 Test Case 12 screen snap shot



The screenshot shows the 'Test Case # 12' window. At the top, there are buttons for 'PWR60', 'POS', 'PDMG', 'PND', 'DC', and 'ESR'. The 'PWR60', 'PDMG', and 'PND' buttons are highlighted in red. Below these are input fields for 'Alt' (0.0 ft), 'Vd' (-0.005 fps), 'Vf' (+0.075 fps), 'Mtr' (Off), and 'Pwr' (155 Wts). To the right of these fields are buttons for 'ISRZ', 'PD', 'SHDPOS' (green with 'R'), 'SHDCMD' (green with 'R'), and 'SHDBTN' (green with 'R'). Below the 'SHDBTN' button is a blue button with 'D'. At the bottom, there are input fields for 'Ter Att' (+6 deg) and 'Drn Att' (-1 deg), and a set of navigation buttons: '-', '<', '>', and '+.

3.13 Test Case 13 screen snap shot



The screenshot shows the 'Test Case # 13' window. At the top, there are buttons for 'PWR60', 'POS', 'PDMG', 'PND', 'DC', and 'ESR'. Below these are input fields for 'Alt' (+49.9 ft), 'Vd' (-6.666 fps), 'Vf' (+99.990 fps), 'Mtr' (MP2), and 'Pwr' (180 Wts). To the right of these fields are buttons for 'ISRZ', 'PD', 'SHDPOS' (white with 'D'), 'SHDCMD' (white with 'D'), and 'SHDBTN' (green with 'R'). Below the 'SHDBTN' button is a blue button with 'D'. At the bottom, there are input fields for 'Ter Att' (-1 deg) and 'Drn Att' (+5 deg), and a set of navigation buttons: '-', '<', '>', and '+.

4) JaCoCo Coverage Reports & JUnit test results –

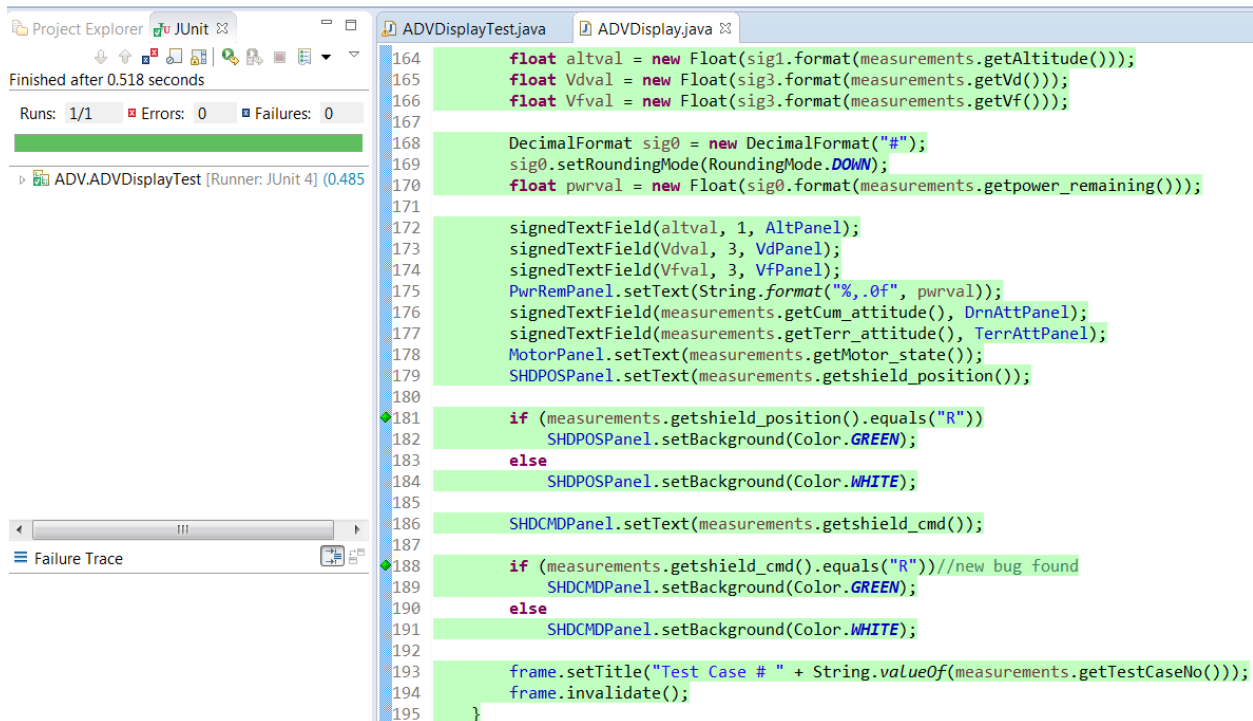
The image displays two screenshots of an IDE interface, likely Eclipse, showing JUnit test results and the corresponding Java code for a test class named `ADVDisplayTest`.

Top Screenshot:

- JUnit Results:** The test `ADV.ADVDisplayTest` [Runner: JUnit 4] (0.485) is shown as passed. The summary indicates 1/1 runs, 0 errors, and 0 failures.
- Code Editor:** The file `ADVDisplayTest.java` is open. The `updateDisplay` method is visible, which updates the display based on various alert conditions. The code uses `Color` constants to set the background and foreground colors of different panels.

Bottom Screenshot:

- JUnit Results:** The test `ADV.ADVDisplayTest` [Runner: JUnit 4] (0.485) is shown as passed. The summary indicates 1/1 runs, 0 errors, and 0 failures.
- Code Editor:** The file `ADVDisplayTest.java` is open, showing the continuation of the `updateDisplay` method. The code handles additional alert conditions like `isDC()`, `isISRZ()`, `isPD()`, and `isESR_latch()`, and formats numerical data using `DecimalFormat` and `Float`.



5) Test results-

All tests passed successfully.

6) Bugs found/code changes made.

We found 2 new bugs that were remained unknown in project part 3 during the testing in project part 4.

We have updated the log form last time and mentioning the new bugs found in the end of the spreadsheet as Error no 28, 29. Spreadsheet is attached in the zip file with the name of "Updated Functional problem listing spreadsheet-Software Testing".

Code Changes:

Added the following code for Shield Button:

```

//Shield button code added
public void setShieldButton(String position) {
    if(position.equals("R")) {

        tglbtnR.setBackground(Color.GREEN);
        tglbtnR.setForeground(Color.BLACK);

    } else {
        tglbtnR.setBackground(Color.WHITE);
        tglbtnR.setForeground(Color.BLACK);
    }
    tglbtnR.invalidate();
}

```