

# GUIDE FOR MODMAKERS

## 1. Overview

This document is meant for users who edit *Resource.cpp*. I recommend that you first read „Guide For Missionmakers” document in order to understand changes done to the dialogs.

## 2. Reading Changes

Here's how to read *Resource.cpp* from this package. This is a list of all the classes that were modified:

```
/* ----- RESOURCE ----- */
    // Message box (tweak)
class RscMsgBox

/* ----- MISSION EDITOR ----- */
    // Main screen
class RscNotebook

    // Map
class RscMap : RscNotebook

    // Mission editor controls
class RscDisplayArcadeMap : RscMap

    // Unit menu (tweak + fix)
class RscDisplayArcadeUnit

    // Group menu (tweak)
class RscDisplayArcadeGroup

    // Marker menu (tweak)
class RscDisplayArcadeMarker

    // Trigger menu (fix + tweak)
class RscDisplayArcadeSensor
```

```

        // Effects menu (tweak)
class RscDisplayArcadeEffects

        // Waypoint menu (fix + tweak)
class RscDisplayArcadeWaypoint

/* ----- CHAT -----*/
        // Current channel
class RscDisplayChannel

        // Chat input
class RscDisplayChat

        // Talking icon
class RscDisplayVoiceChat

/* ----- MISSION EDITOR -----*/
        // Load mission (tweak)
class RscDisplayTemplateLoad

        // Intel options in mission editor (fix + tweak)
class RscDisplayIntel

/* ----- RESOURCE -----*/
        // Top black border
class RscBackgroundStripeTop : RscText

        // Bottom black border
class RscBackgroundStripeBottom : RscText

        // Darker main menu
class RscBackgroundStripeDark : RscText

/* ----- MENUS -----*/
        // Extra main menu functionality - mods, download, master server (added)
class MAINMENU_MODSLIST

        // Extra main menu functionality - input box (added)
class MAINMENU_INPUT

        // Main menu (aspect + tweak + fix)
class RscDisplayMain : RscDisplayBackgroundStripesDark

        // Single mission selection screen (aspect + tweak)
class RscDisplaySingleMission : RscDisplayStripesLayeredBackground

        // Options
class RscDisplayOptions : RscDisplayStripesBrightLayeredBackground

```

```

/* ----- GAME OPTIONS ----- */
    // Graphics
class RscDisplayOptionsVideo : RscDisplayStripesBrightLayeredBackground

    // Audio
class RscDisplayOptionsAudio : RscDisplayStripesBrightLayeredBackground

    // Difficulty
class RscDisplayDifficulty : RscDisplayStripesBrightLayeredBackground

    // Controls
class RscDisplayConfigure : RscDisplayStripesBrightLayeredBackground


/* ----- MULTIPLAYER ----- */
    // Server browser (aspect + tweak)
class RscDisplayMultiplayer : RscDisplayStripesLayeredBackground

    // Change port
class RscDisplayPort : RscDisplayStripesLayeredBackground

    // Change password
class RscDisplayPassword : RscDisplayStripesLayeredBackground

    // Change IP address
class RscDisplayIPAddress : RscDisplayStripesLayeredBackground

    // Change filter
class RscDisplayFilter : RscDisplayStripesLayeredBackground

    // Mission selection (aspect + tweak)
class RscDisplayServer : RscDisplayStripesLayeredBackground

    // Mission selection with list of players (aspect + tweak)
class RscDisplayRemoteMissions : RscDisplayServer

    // Mission Wizard template selection (aspect + tweak)
class RscDisplayWizardTemplate : RscDisplayStripesLayeredBackground

    // Mission Wizard map screen (aspect + tweak + fix)
class RscDisplayWizardMap : RscDisplayStripesLayeredBackground

    // Client screen (aspect + tweak)
class RscDisplayClient

    // Lobby (aspect + tweak)
class RscDisplayMultiplayerSetup : RscDisplayStripesLayeredBackground

    // In-Game list of players
class RscDisplayMPPlayers : RscDisplayStripesLayeredBackground

    // Join in progress
class RscDisplayClientWait : RscDisplayMPPlayers

    // Map Screen
class RscDisplayMainMap

```

```

        // Briefing SP
class RscDisplayGetReady : RscDisplayMainMap

        // Briefing MP Server (aspect + tweak)
class RscDisplayServerGetReady : RscDisplayGetReady

        // Briefing MP Client (aspect + tweak)
class RscDisplayClientGetReady : RscDisplayGetReady

        // Debriefing (aspect + tweak)
class RscDisplayDebriefing : RscDisplayBackgroundStripes

/* ----- GAME MENUS ----- */
        // Island selection screen (aspect + tweak)
class RscDisplaySelectIsland

        // Profiles
class RscDisplayLogin

        // Profile edit (aspect + tweak)
class RscDisplayNewUser

        // Campaign screen (aspect + tweak)
class RscDisplayCampaignLoad

        // Campaign revert (aspect + tweak)
class RscDisplayRevert

/* ----- GAME MENUS ----- */
        // In-game pause
class RscDisplayInterrupt : RscDisplayBackgroundStripesDark

        // Death screen
class RscDisplayMissionEnd : RscDisplayBackgroundStripesDark

/* ----- GAME UI ----- */
        // Weapon info, fuel, hint etc.
class RscInGameUI

        // Rsc/Cut titles (aspect + fix)
class RscTitles

```

There are three types of changes:

- *aspect* – moved / enlarged elements so that they fit the screen
- *fix* – applied corrections to misaligned items
- *tweak* – improved functionality for user comfort

In the parenthesis you'll find which type of changes were applied to the class below. If there's no description then that means it's only the *aspect* type.

```
// Briefing SP
class RscDisplayGetReady : RscDisplayMainMap
{

// Briefing MP Server (aspect + tweak)
class RscDisplayServerGetReady : RscDisplayGetReady
{
```

If a sub-class was edited then it has „edited” comment next to it's name. If there aren't any „edited” then all sub-classes were modified.

```
// Death screen
class RscDisplayMissionEnd : RscDisplayBackgroundStripesDark
{
    class Title : RscText // edited
    class Subtitle : RscText
```

If a class was fixed / tweaked then usually it's indicated by a comment next to the property.

```
// Profile edit (aspect + tweak)
class RscDisplayMissionEnd : RscDisplayBackgroundStripesDark
{
    class Notebook : RscObject // edited
    {
        class ValueFace : RscObjNotebookListBox // edited (tweak)
        {
            idc = 102;
            x = 0.525;
            y = 0.056; // -0.027
            w = 0.45;
            h = 0.395; // +0.215
            rows = 11; // +8 rows
        }
    }
}
```

Classes with the *aspect* type utilise \_\_EVAL command to calculate new position / size of the element.

```
// Main menu (aspect + tweak + fix)
class RscDisplayMain : RscDisplayBackgroundStripesDark
{
    class SingleMission : RscActiveMenu // edited
    {
        x = __EVAL( 0.72 + AR_modifX );
```

Macro **AR\_modifX** is set by the *Aspect\_Ratio.hpp* file. On 4:3 it's **0.72 + 0** and on 16:9 it's **0.72 + 0.166667** so the button will be moved to the right on the widescreen.

```
// Mission Wizard map screen (aspect + tweak + fix)
class RscDisplayWizardMap : RscDisplayStripesLayeredBackground
{
    class Background : RscText // edited
    {
        x = __EVAL( 0 - AR_modifX - AR_modifX_2NDMON );
        y = __EVAL( 0 - AR_modifY );
        w = __EVAL( 1 + AR_modifX * 2 + AR_modifX_2NDMON * 2 );
        h = __EVAL( 1 + AR_modifY * 2 );
    }
}
```

Backgrounds were enlarged to cover entire screen. Macro **AR\_modifX** is half the size of the extended space and **AR\_modifX\_2NDMON** indicates size of the dialog space on the side monitor (for users with triplehead).

Coordinate zero points to the left edge in the original 4:3 dialog space. So to start from the left edge on the extended space I subtracted **AR\_modifX** from it:

```
x = __EVAL( 0 - AR_modifX );
```

Additionally to cover triplehead I subtracted the size of an extra monitor:

```
x = __EVAL( 0 - AR_modifX - AR_modifX_2NDMON );
```

Now to have the width to cover all monitors I sum up:

- size of the original 4:3 dialog space
- two halves of the extended dialog space (widescreen)
- two side monitors (triplehead)

```
w = __EVAL( 1 + AR_modifX * 2 + AR_modifX_2NDMON * 2 );
```

### 3. Making Changes

For text editing I use Notepad++:

<https://notepad-plus-plus.org/>

For text comparison I use ExamDiff:

[http://www.prestosoft.com/edp\\_examdiff.asp](http://www.prestosoft.com/edp_examdiff.asp)

If you want to create a new resource file then I recommend to use one of the resources from this package as a basis and then add your own modifications. This will significantly cut work time.

If you want to modify existing mod resource to make it compatible with different screen formats then I recommend to:

- compare it with the original (vanilla *Resource.cpp*) and take notes which classes were modified
- if a class is the same as in the original then replace it with the one from the modified *Resource.cpp* from this package
- if a class is different then manually apply changes (`__EVAL` instructions)

For example: I want to edit WW4mod25 resource. I examine files and find that main menu is different (`class RscDisplayMain`) compared to the original but everything else is the same.

So I copy all the other classes from `OFP_Aspect_Ratio\Files\OFP Resistance 1.96\Resource.cpp` and paste it to WW4mod25.

`RscDisplayMain` is different so I examine which sub-classes need to be modified (`class Line1`, `class Player`, `class Quit` etc.) and then write `__EVAL(value + AR_modif)` to change their position and/or size.

## 4. Testing

For testing your files I recommend to use following settings.

- in the *userInfo.cfg* set values:

```
fovTop = 0.8;  
fovLeft = 1.333333;  
uiTopLeftX = 0.125;  
uiTopLeftY = 0.03125  
uiBottomRightX = 0.875;  
uiBottomRightY = 0.96875;
```

- in the *Aspect\_Ratio.hpp* set macro:

```
#define aspect_ratio_test
```

- and add this code below (on the line 65):

```
#ifndef aspect_ratio_test  
    #define AR_modifX 0.1667  
    #define AR_modifY 0.0333  
    #define AR_modifLine1 0.068  
    #define AR_notebookY 0.008  
    #define AR_headY 0.008  
    #define AR_PlayerListX 0.05  
    #define AR_PlayerListY 0.05  
    #define AR_modifY_menu 0.125  
#endif
```

- Launch game with parameters: `-window -x=1280 -y=768`

Next page contains list of screens to test. Print it out.



## Main Menu

### Profiles

Profile Edit

### Campaign

Campaign revert

### Single Mission

Briefing SP

In-game pause

Death screen

### Multiplayer

Password

Filter (address: internet)

Remote

Port (address: lan)

New

Mission selection

Mission Wizard

Mission Wizard map screen

Lobby

Briefing MP Server

In-game list of players (press P key)

Debriefing

Join (dedicated server)

Client screen

Mission selection with list of players

Briefing MP Client

Join (busy game)

Join in progress (similar to in-game list of players)

### Mission Editor

Main screen

Unit menu

Group menu

Trigger menu

Effects menu

Titles Type Resource

(CWA, BIS, Codemasters, Legal Screen, Features1, Arma\_Cold\_War\_Assault, Flashpoint, Resistance, Binocular, Demo6, Demo7)

Waypoint menu

Marker menu

Intel

Load mission

In-game interface

Soldier

Tank commander

Aircraft

Hint

Radio menu

### Options

Graphics

Audio

Controls

Difficulty

Credits (watch all)

### Mods