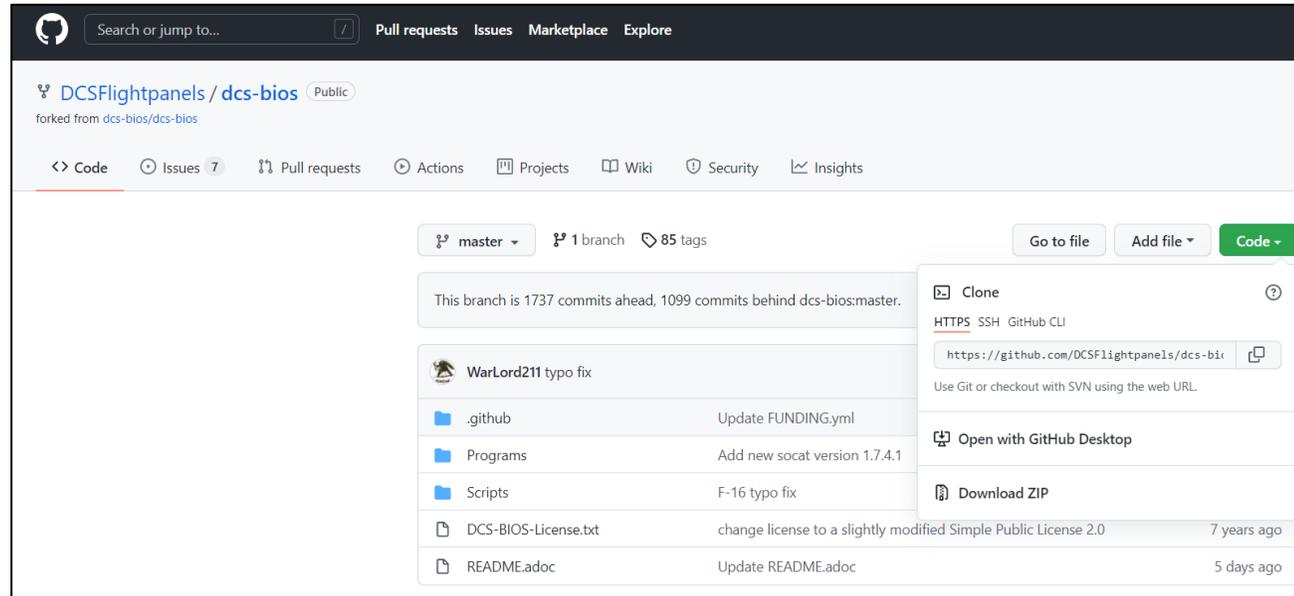


# STEP ONE

## INSTALLING DCS-BIOS 'FLIGHT PANELS' FOR OPEN HORNET

DOWNLOAD or CLONE THE REPOSITORY FROM THE LINK BELOW

<https://github.com/DCSFlightpanels/dcs-bios>

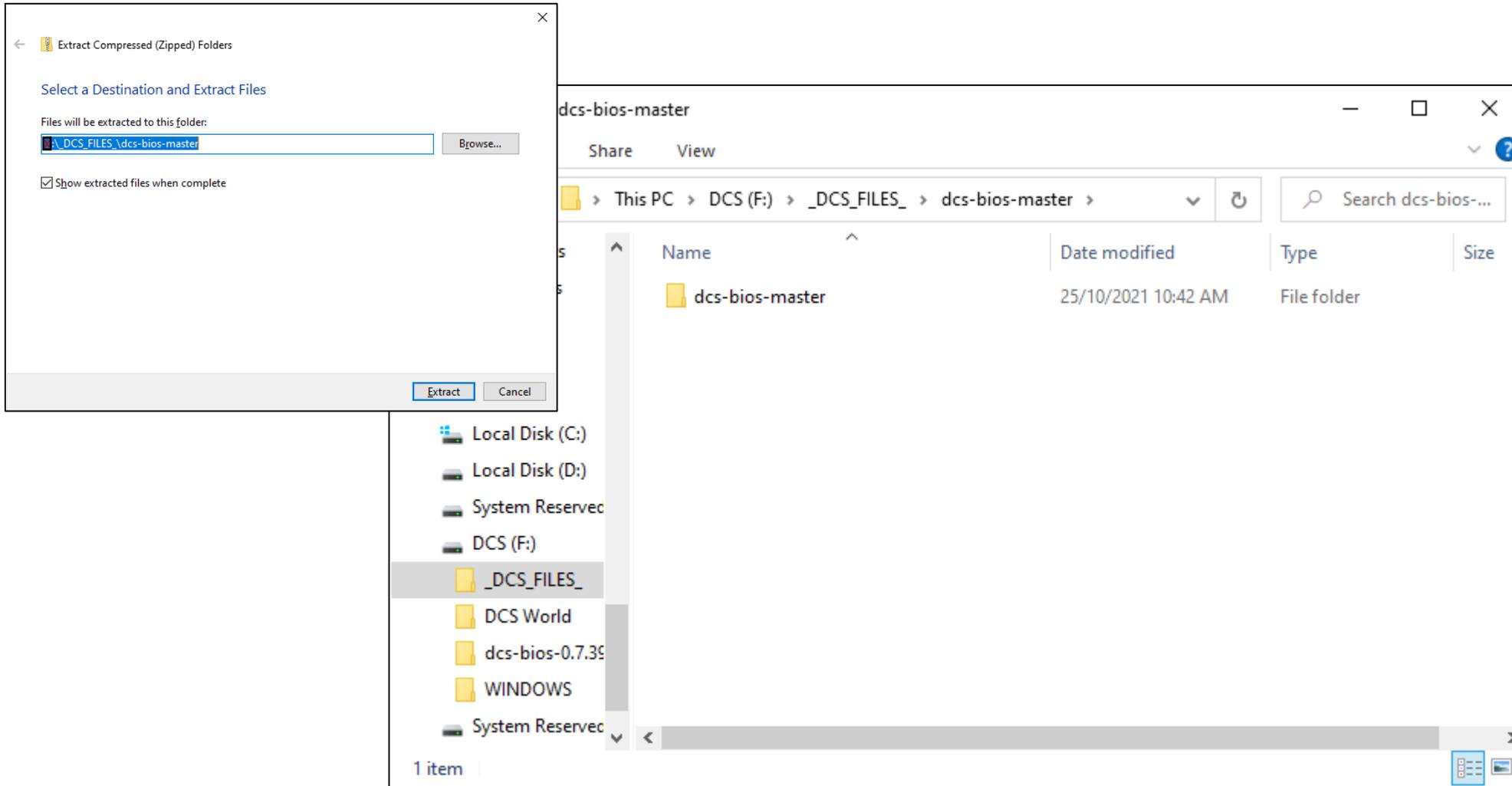


ALSO DOWNLOAD NOTEPAD++ FROM THE BELOW LINK  
IF YOU DON'T ALREADY USE IT

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



## STEP TWO



EXTRACT THE “**dcs-bios-master**” FOLDER TO A TEMPORARY FOLDER OR TO WHERE YOUR DCS GAME DRIVE IS LOCATED, TO CREATE A LOCATION TO EXTRACT THE FLIGHTPANELS FILES FROM



# STEP THREE



The image shows three overlapping Windows File Explorer windows. The top window is titled 'dcs-bios-master' and shows a folder structure with 'Scripts' highlighted in red. The middle window is titled 'Scripts' and shows a folder named 'DCS-BIOS' highlighted in red. A text box with a grey background and black text says 'COPY DCS-BIOS FOLDER IN THE DCS SAVED GAMES'. A blue arrow points from the 'DCS-BIOS' folder in the middle window to the bottom window. The bottom window is titled 'Scripts' and shows the path 'Local Disk (C:) > Users > User > Saved Games > DCS > Scripts' with 'DCS-BIOS' highlighted in red in the file list.

COPY THE “**DCS-BIOS**” FOLDER FROM THE “**dcs-bios-master/Scripts**” FOLDER TO THE “**DCS/Scripts**” FOLDER ON YOUR MAIN DRIVE WHERE YOUR “**Saved Games**” ARE LOCATED. DO NOT COPY THE “**Export.lua**” FILE AT THIS STAGE, SEE THE NEXT STEP



# STEP FOUR



USING NOTEPAD++ COPY/ADD THIS LINE INTO THE EXISTING "Export.lua" FILE

DO NOT USE STANDARD WINDOWS NOTEPAD TO UPDATE "Export.lua".



IF YOU ALREADY HAVE DCS INSTALLED THERE WILL BE AN EXISTING FILE CALLED "Export.lua" IN THE SCRIPTS DIRECTORY USING NOTEPAD++ COPY THE - `dofile(Ifs.writedir()..[[Scripts\DCS-BIOS\BIOS.lua]])` - LINE INTO THE EXISTING "Export.lua" FILE AND RESAVE THE FILE.

DISCLAIMER, THIS INFORMATION WAS CORRECT IN OCT 2021, ANY CHANGES TO DCS-BIOS FLIGHT PANELS THAT OCCUR POST THIS MAY NOT HAVE BEEN CAPTURED, THE USER SHOULD ALSO CHECK FOR REGULAR UPDATES VIA GITHUB TO DCS-BIOS FLIGHT PANELS OR THE ARDUINO LIB FILE

## STEP FIVE

ENSURE YOU HAVE GOOGLE CHROME INSTALLED AND IT IS UPDATED, OPEN CHROME

[https://www.google.com.au/intl/en\\_au/chrome/](https://www.google.com.au/intl/en_au/chrome/)

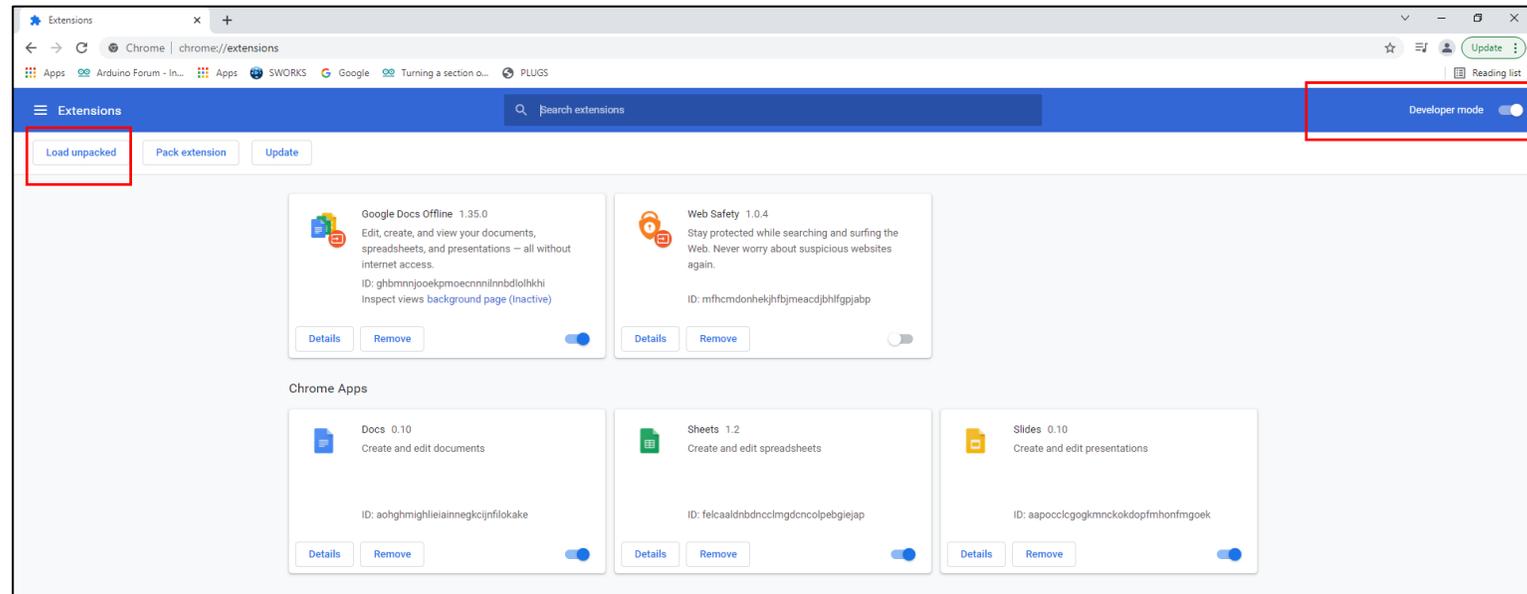
IN THE ADDRESS BAR TYPE **chrome://extensions/**

LOCATE “**Developer mode**” IN THE TOP RIGHT CORNER AND TURN IT ON

THE “**Load unpacked**” BUTTON WILL BECOME VISIBLE IN THE LEFT CORNER, SELECT THIS



*Any Chromium based Browser will work:  
Google Chrome, Vivaldi, Opera,...*



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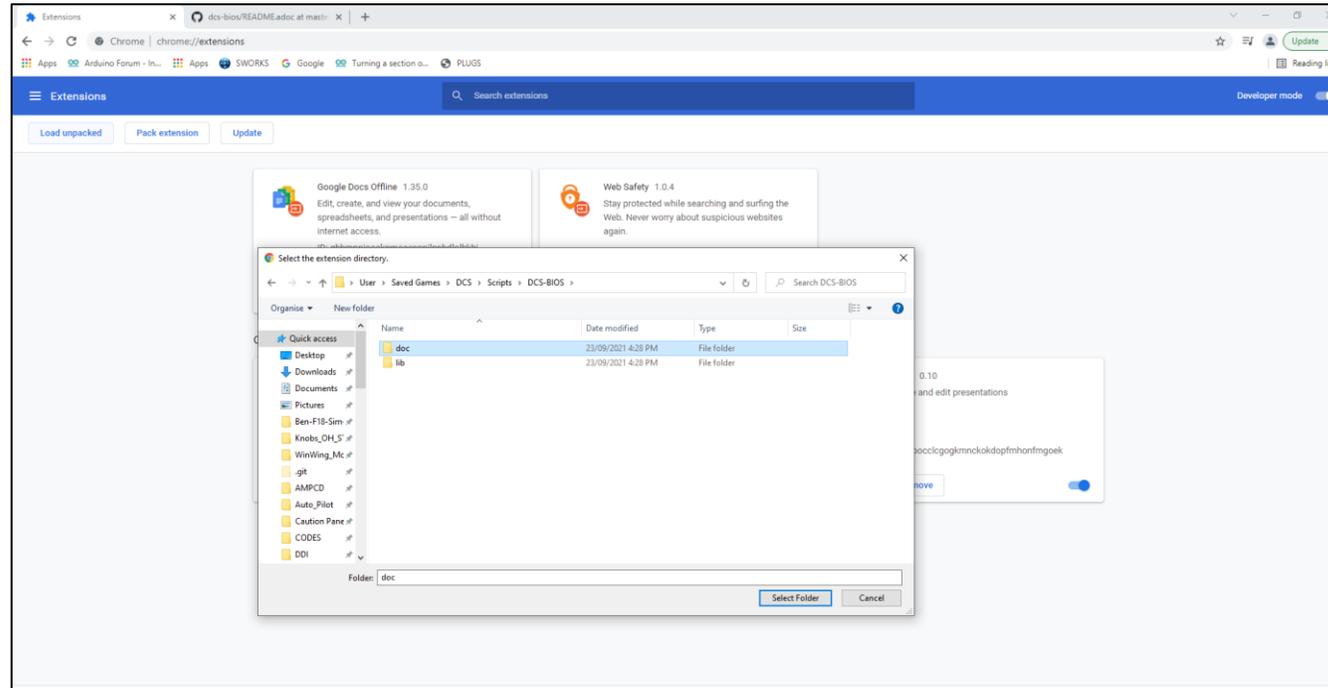
## STEP SIX

CHOOSE THE “**doc**” FOLDER WHERE YOU COPIED THE DCS-BIOS FOLDER TO

“**Saved Games\DCS\Scripts\DCS-BIOS\doc**”

CLICK “**Select Folder**” THE PROGRAM WILL UNPACK IN THE BACKGROUND

CLOSE THE EXTENSIONS WINDOW



## STEP SEVEN

TO CONFIRM **DCS-BIOS CONTROL REFERENCES** HAS INSTALLED,

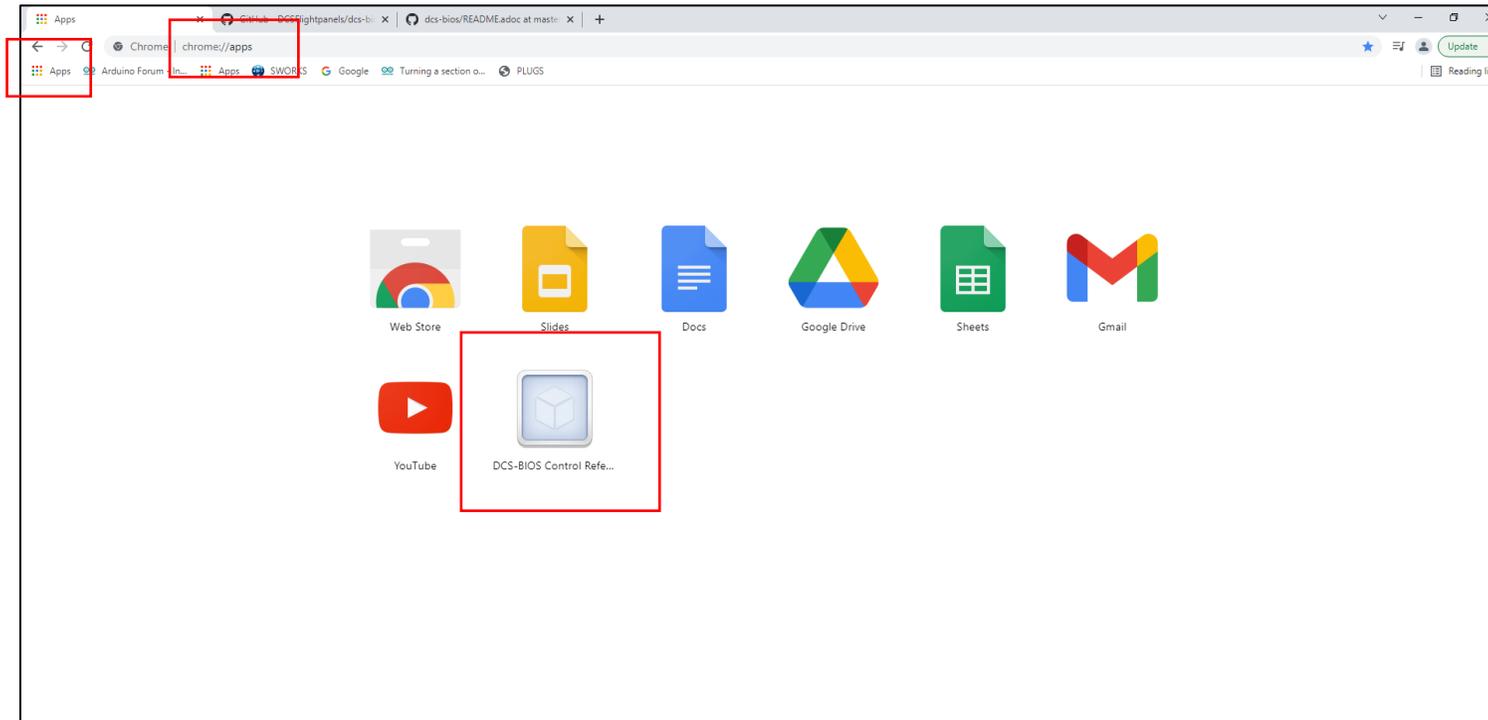
EITHER TYPE **chrome://apps/** INTO THE COMMAND LINE

OR  
CLICK



ICON

You will see the **DCS-BIOS CONTROL REFERENCES** ICON IN THE WINDOW



*Users for the DCSFlightpanel Software.  
(Only use with Saitek/Logitech Panels)  
Can Stop here.  
See Page 12 for use of Control Reference*



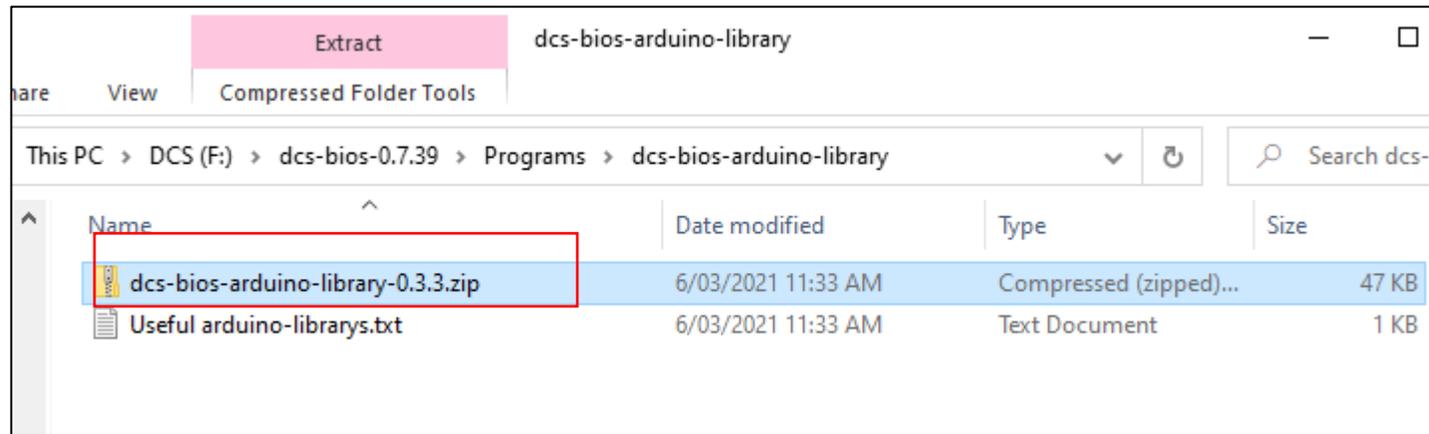
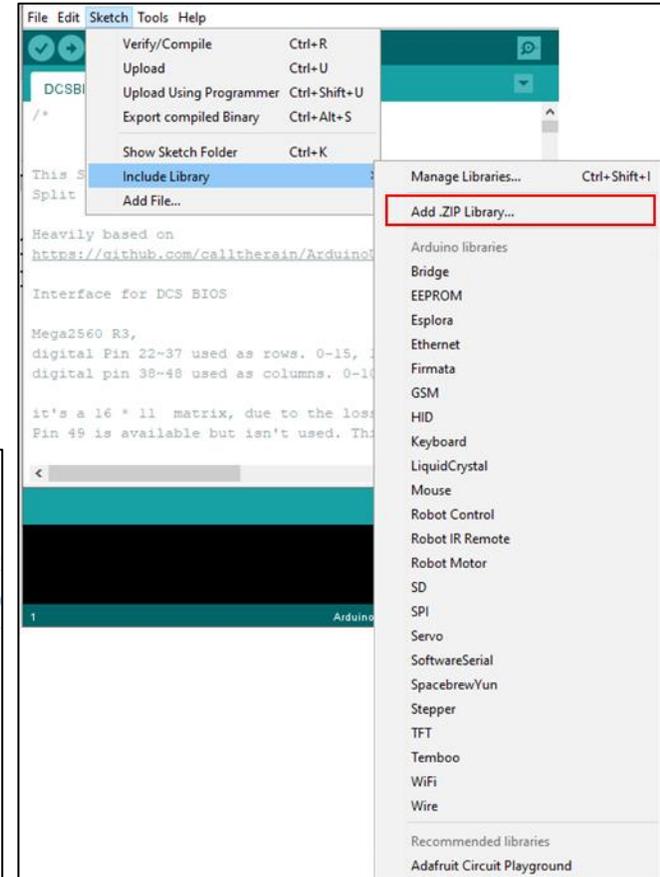
## STEP EIGHT

INSTALL THE ARDUINO LIB.

IF YOU HAVE BEEN RUNNING DCS-BIOS HUB VERSION YOU WILL NEED TO DELETE OR OVERRIDE THE EXISTING DCS-BIOS LIBRARY

ADD THE NEW LIBRARY VIA THE ARDUINO APP

FROM THE ZIP FILE IN THE “**Programs**” FOLDER



# STEP NINE

## DCS TO ARDUINO INTERFACE

DEPENDING HOW MANY ARDUINO'S YOUR SIMULATOR WILL RUN A SERIAL INTERFACE TO THE COCKPIT VIA ONE OR MORE ARDUINO CONTROLLERS.

THESE **CMD** FILES NEED TO BE UNZIPPED AND CORRECTLY LOCATED WITHIN THE “**socat**” FOLDER.

LOCATE THE “**socat**” FOLDER INSIDE THE “**Programs**” DIRECTORY, AND UNZIP AND COPY ALL THE FILES 32 BIT OR 64 BIT FILES BACK INTO THE “**socat**” FOLDER



The image shows a sequence of three overlapping File Explorer windows. The leftmost window shows a folder structure with 'socat' selected. The middle window shows a file list with 'WIN\_socat-1.7.3.2-32bit' and 'WIN\_socat-1.7.3.2-64bit' selected. The rightmost window shows the contents of the 'socat' folder, with a blue arrow pointing from the selected files in the middle window to the 'socat' folder in this window.

Name	Type	Compressed size	Password ...	Size	Ratio
BUGREPORTS	File	1 KB	No	1 KB	44%
CHANGES	File	15 KB	No	38 KB	62%
COPYING	File	7 KB	No	18 KB	63%
EXAMPLES	File	6 KB	No	17 KB	64%
FAQ	File	2 KB	No	4 KB	52%
msys-2.0.dll	Application extension	1,153 KB	No	3,149 KB	64%
msys-crypto-1.0.0.dll	Application extension	992 KB	No	2,205 KB	55%
msys-ncursesw6.dll	Application extension	151 KB	No	331 KB	55%
msys-readline7.dll	Application extension	111 KB	No	238 KB	54%
msys-ssl-1.0.0.dll	Application extension	174 KB	No	413 KB	42%
msys-z.dll	Application extension	51 KB	No	122 KB	42%
README	File	6 KB	No	15 KB	36%
SECURITY	File	1 KB	No	2 KB	51%
socat	Application	120 KB	No	298 KB	60%
VERSION	File	1 KB	No	1 KB	0%

**COPY ALL THE FILES 32 OR 64 BIT FILES BACK INTO THE **socat** FOLDER**



# RUNNING DCS-BIOS (FLIGHT PANELS VERSION)

## CONNECTING TO A SINGLE ARDUINO

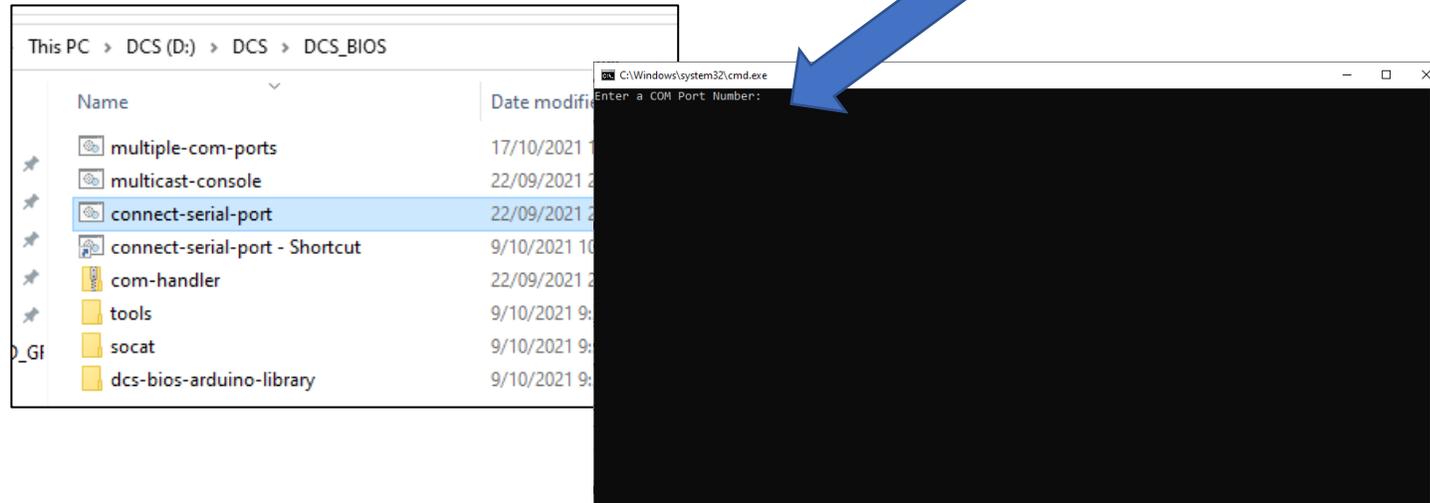
LOCATE THE “COM PORT NUMBER” FOR THE ARDUINO CONNECTED TO THE PC. THIS CAN BE DONE VIA THE ARDUINO APP OR DEVICE MANAGER.

IN THE **“socat”** FOLDER RUN **“connect-serial-port”** ENTER THE COM PORT NUMBER OF THE ARDUINO THAT YOU WITH TO CONNECT TO

THIS STEP CAN BE COMPLETED BEFORE OR WHILE RUNNING DCS, IT CAN ALSO BE STOPPED AND STARTED WHILE THE GAME IS ACTIVE IF YOU WITH TO MAKE A SKETCH CHANGE.



ENTER THE COM PORT NUMBER HERE AND PRESS ENTER



# RUNNING DCS-BIOS (FLIGHT PANELS VERSION)



## CONNECTING TO MULTIPLE ARDUINOS

LOCATE THE “COM PORT NUMBERS” FOR THE ARDUINOS CONNECTED TO THE PC. THIS CAN BE DONE VIA THE ARDUINO APP OR DEVICE MANAGER.

OPEN AND EDIT THE “**multi-coms-ports**” FILE WITH NOTEPAD++  
ENTER ALL THE ARDUINO COM PORT NUMBERS YOU WISH TO CONNECT TO AFTER “COMPORTS=” WITH A SPACE BETWEEN. SAVE AND CLOSE NOTEPAD++

```
D:\DCS\DCS_BIOS\multiple-com-ports.cmd - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
multiple-com-ports.cmd
1 @echo off
2 REM The COMPORTS variable should be set to a space-separated list of COM port numbers:
3 set COMPORTS=4 5 6 8
4
5 for %%i in (%COMPORTS%) do start
6
```

IN THE “**socat**” FOLDER RUN “**multi-com-ports**” THE PROGRAM WILL CONNECT THE PORTS AUTOMATICALLY, AFTER COUNTING DOWN FROM 5 SECONDS

```
cmd Select C:\Windows\system32\cmd.exe
Waiting for 5 seconds, press a key to continue ...
Waiting for 5 seconds, press a key to continue ...
Waiting for 4 seconds, press a key to continue ...
Waiting for 5 seconds, press a key to continue ...
```

THIS STEP CAN BE COMPLETED BEFORE OR WHILE RUNNING DCS, IT CAN ALSO BE STOPPED AND STARTED WHILE THE GAME IS ACTIVE IF YOU WISH TO MAKE A SKETCH CHANGE.

DO NOT USE STANDARD WINDOWS NOTEPAD TO UPDATE THE “**multi-coms-ports**” FILE



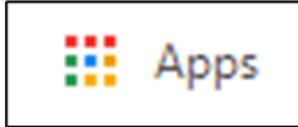
# RUNNING DCS-BIOS (FLIGHT PANELS VERSION)

## DCS-BIOS CONTROL REFERENCES

EITHER TYPE <chrome://apps/> INTO THE COMMAND LINE

OR

CLICK



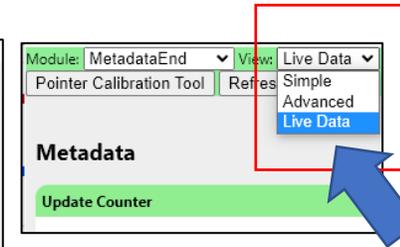
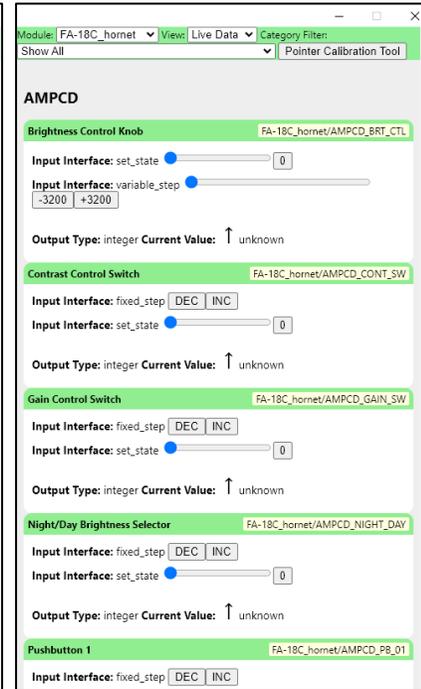
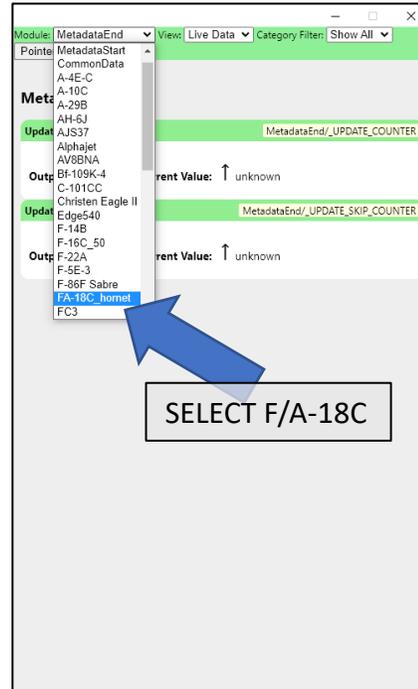
ICON

You will see the **DCS-BIOS CONTROL REFERENCES** ICON IN THE WINDOW

OPEN THE APP



THIS STEP CAN ONLY BE COMPLETED AFTER YOU ARE IN THE DCS COCKPIT, AND MUST BE RESTARTED EACH TIME YOU EXIT THE ACTIVE GAME OR CLOSE DCS. YOU DO NOT NEED THIS APP RUNNING TO OPERATE THE GAME WHEN FLYING, IT IS USED TO GET DRAFT SKETCHES, OR MONITOR OUTPUT VALUES DURING TESTING.



AS REQUIRED SELECT BETWEEN  
**SIMPLE** — SIMPLE ARDUINO CODE REFERENCES  
**ADVANCED** — ADVANCED ARDUINO CODE REFERENCES  
**LIVE DATA** — LIVE INPUT / OUTPUT AND SIMULATOR DATA

