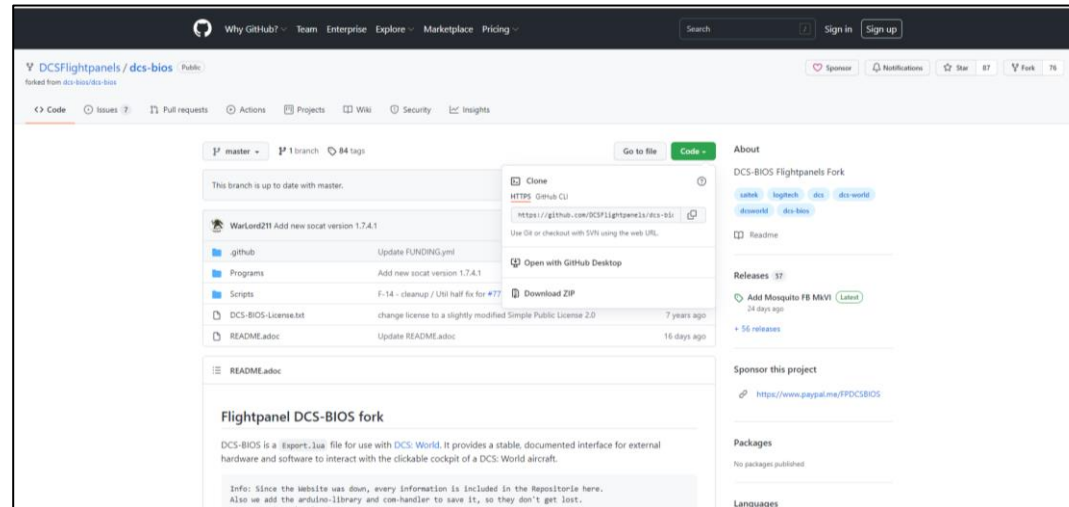


# STEP ONE

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

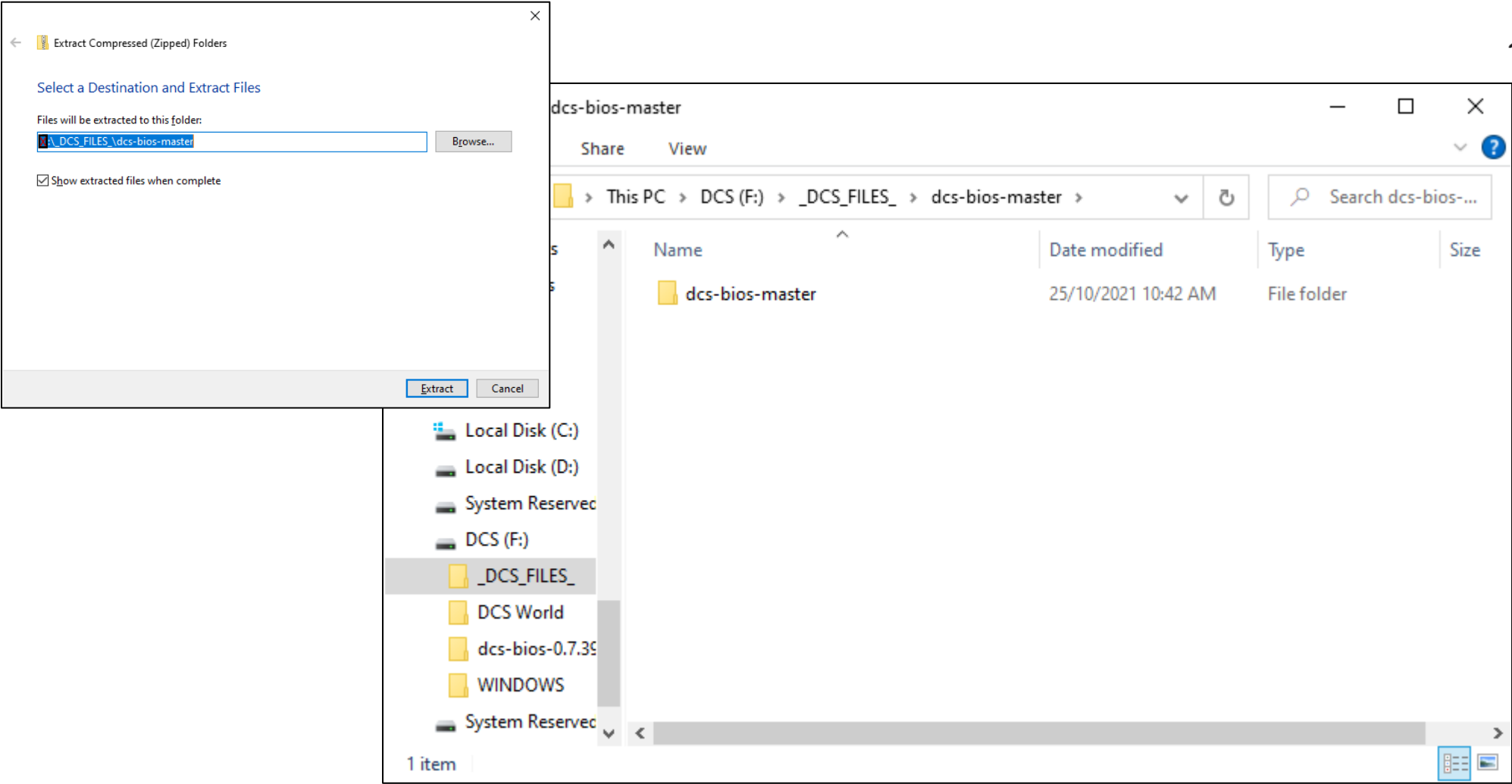
DOWNLOAD or CLONE THE REPOSITORY FROM THE LINK BELOW

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



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# STEP TWO

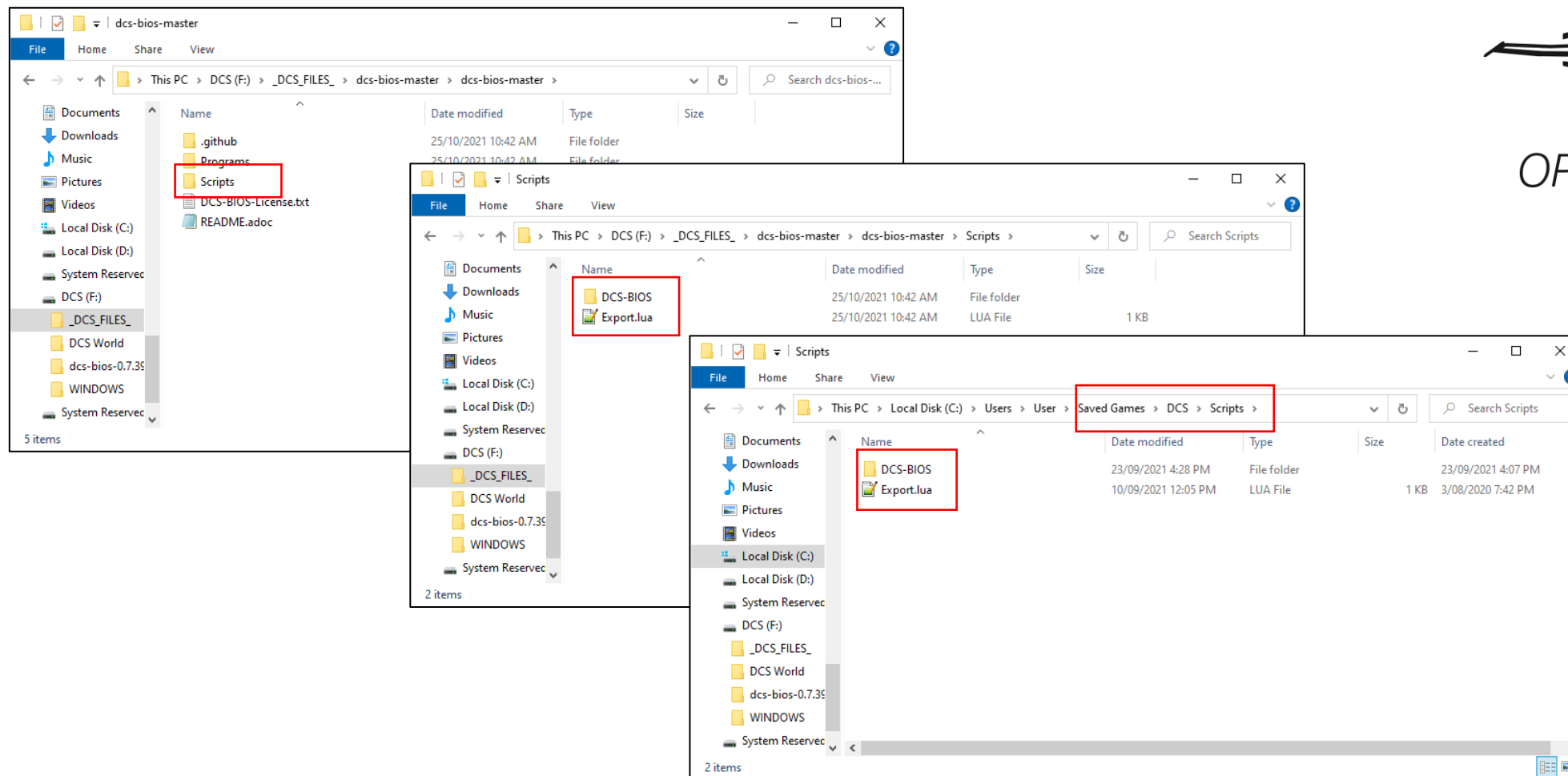


EXTRACT THE “**dcs-bios-master**” FOLDER TO A TEMPORARY FOLDER OR TO WHERE YOUR DCS GAME DRIVE IS LOCATED TO CREATE A LOCATION TO EXTRACT THE FILES FROM



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## STEP THREE



COPY THE “**Scripts**” FOLDER FROM THE “**dcs-bios-master**” FOLDER  
TO i.e “**DCS**” FOLDER ON YOUR MAIN DRIVE WHERE YOUR “**Saved Games**” ARE LOCATED  
YOU MAY ALREADY HAVE AN “**Export.lua**” FILE IN THIS DIRECTORY, PLEASE ALLOW IT TO BE  
OVER WRITTEN, YOU MAY WANT TO CREATE A BACK UP

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## STEP FOUR

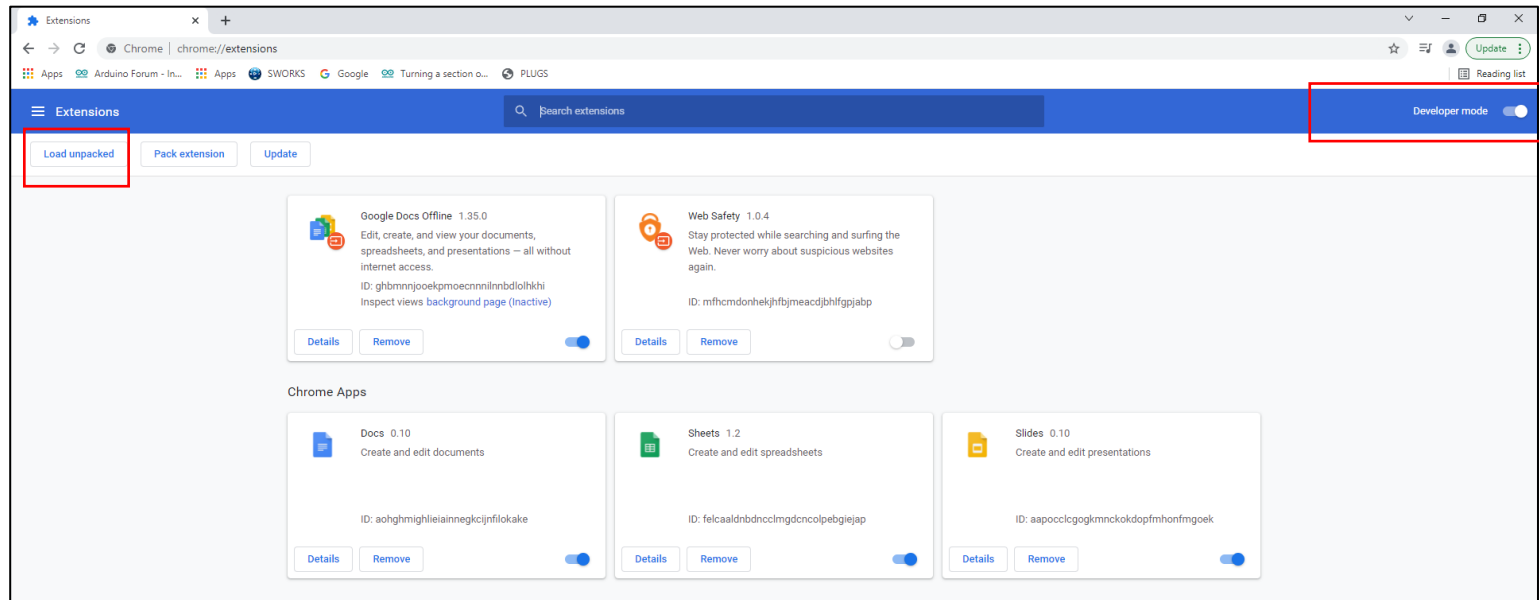
ENSURE YOU HAVE GOOGLE CHROME INSTALLED AND IT IS UPDATED, OPEN CHROME

[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 unpack**” BUTTON WILL BECOME VISIBLE IN THE LEFT CORNER, SELECT THIS



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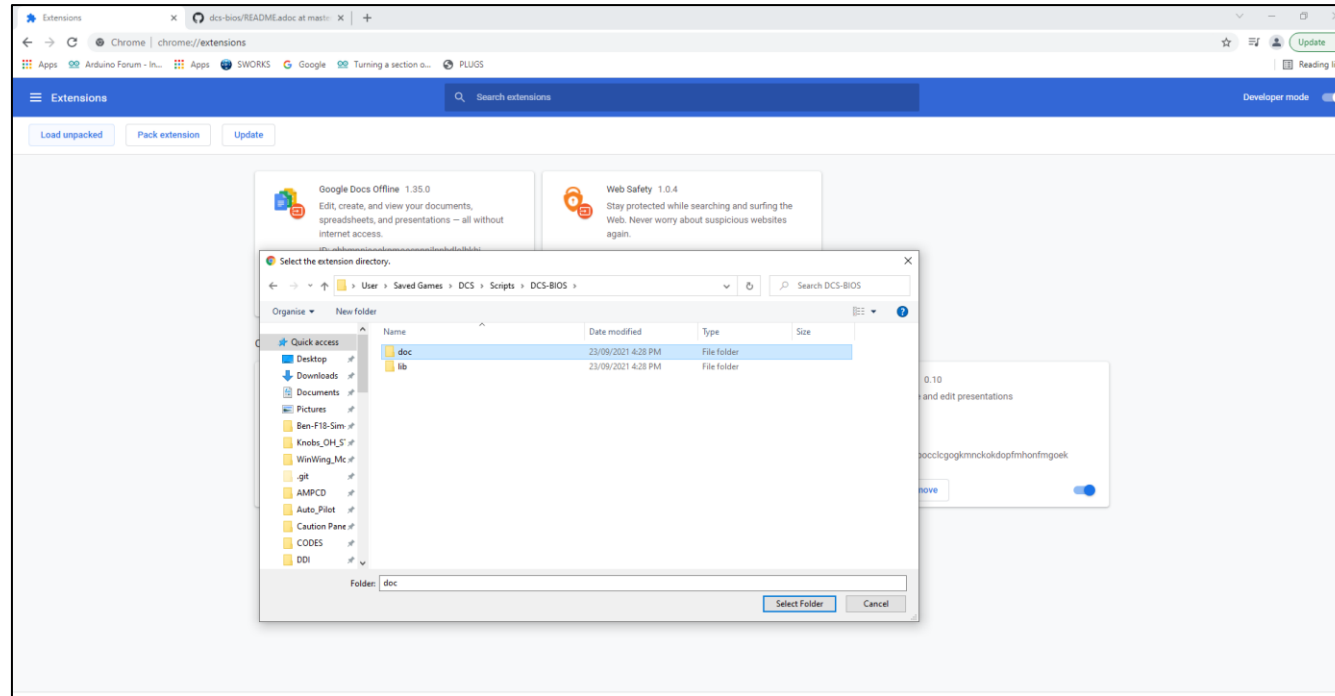
## STEP FIVE

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



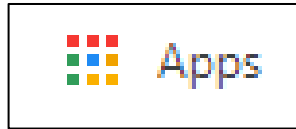
DISCLAIMER, THIS INFORMATION WAS CORRECT IN OCT 2021, ANY CHANGES TO DCS-BIOS FLIGHT PANELS THAT OCCUR POST THIS MAY NOT HAVE BEEN CAPTURED, THE USER SHOULD ALSO CHECK FOR REGULAR UPDATES VIA GITHUB TO DCS-BIOS FLIGHT PANELS OR THE ARDUINO LIB FILE

## STEP SIX

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

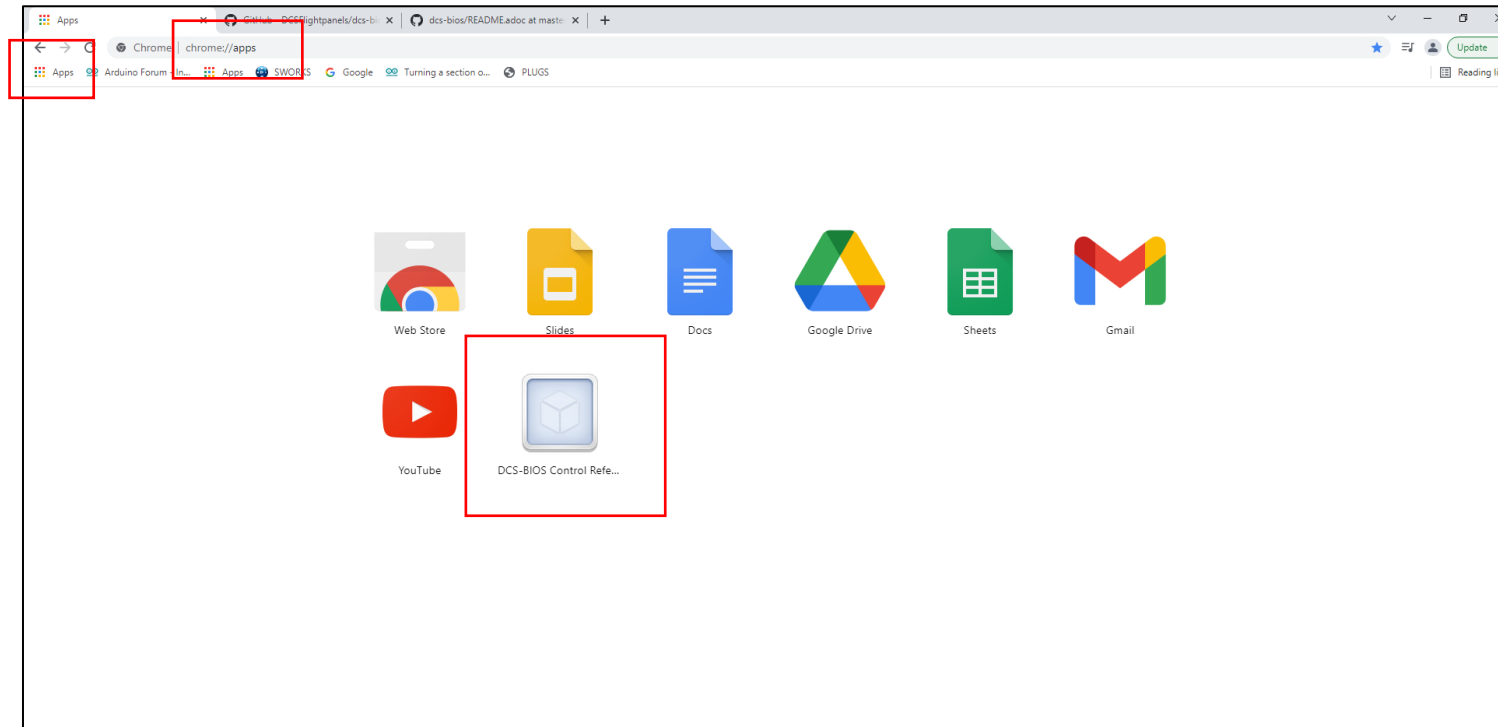
EITHER TYPE **chrome://apps/** INTO THE COMMAND LINE

OR  
CLICK



ICON

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



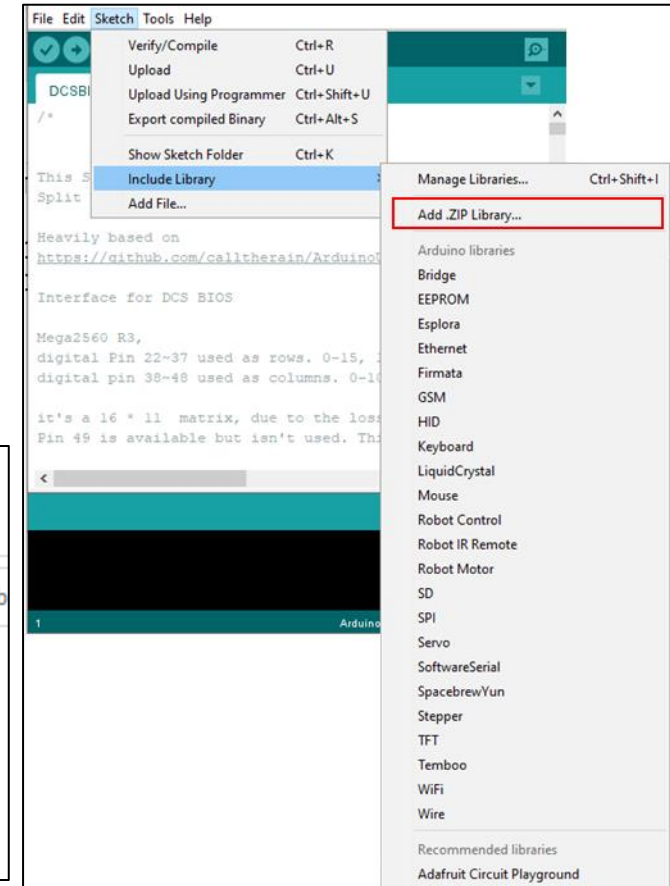
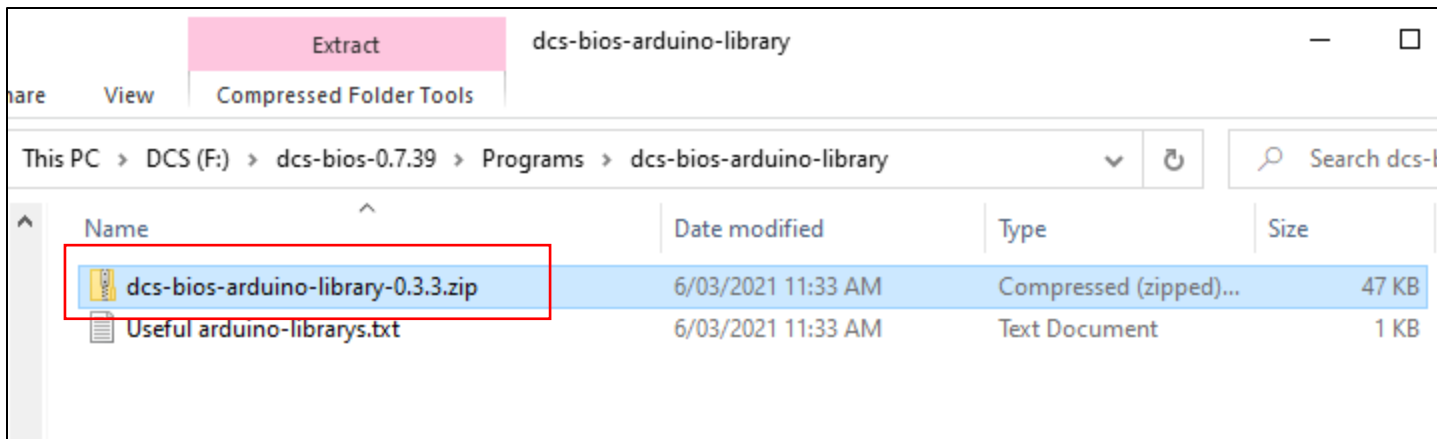
## STEP SEVEN

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 EIGHT

### 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 OR 64 BIT FILES BACK INTO THE “**socat**” FOLDER

The screenshot shows three overlapping File Explorer windows. The top-left window shows the 'Programs' directory with folders like 'dcs-bios-arduino-library', 'socat', 'tools', 'com-handler', 'connect-serial-port', 'multicast-console', and 'multiple-com-ports'. The middle-left window shows the contents of the 'socat' folder, including 'COPYING', 'UNIX\_socat-1.7.4.1.tar.gz', 'WIN\_socat-1.7.3.2-32bit', and 'WIN\_socat-1.7.3.2-64bit'. The bottom-right window shows the contents of the 'WIN\_socat-1.7.3.2-64bit' folder, which contains various files including 'BUGREPORTS', 'CHANGES', 'COPYING', 'EXAMPLES', 'FAQ', 'msys-2.0.dll', 'msys-crypto-1.0.0.dll', 'msys-ncursesw6.dll', 'msys-readline7.dll', 'msys-ssl-1.0.0.dll', 'msys-z.dll', 'README', 'SECURITY', 'socat.exe', 'UNIX\_socat-1.7.3.4.tar.gz', 'VERSION', 'WIN\_socat-1.7.3.2-32bit.zip', and 'WIN\_socat-1.7.3.2-64bit.zip'. A blue arrow points from the 'WIN\_socat-1.7.3.2-64bit' folder to the 'socat' folder.

Name	Type	Compressed size	Password ...	Size	Ratio	Date modified
BUGREPORTS	File	1 KB	No	1 KB	44%	14/03/2019 5:33
CHANGES	File	15 KB	No	38 KB	62%	14/03/2019 5:33
COPYING	File	7 KB	No	18 KB	63%	14/03/2019 5:33
EXAMPLES	File	6 KB	No	17 KB	64%	14/03/2019 5:33
FAQ	File	2 KB	No	4 KB	52%	14/03/2019 5:33
msys-2.0.dll	Application extension	1,153 KB	No	3,149 KB	64%	14/03/2019 5:33
msys-crypto-1.0.0.dll	Application extension	992 KB	No	2,205 KB	55%	14/03/2019 5:33
msys-ncursesw6.dll	Application extension	151 KB	No	331 KB	55%	14/03/2019 5:33
msys-readline7.dll	Application extension	111 KB	No	238 KB	54%	14/03/2019 5:33
msys-ssl-1.0.0.dll	Application extension	174 KB	No	413 KB	54%	14/03/2019 5:33
msys-z.dll	Application extension	51 KB	No	111 KB	54%	14/03/2019 5:33
README	File	6 KB	No	12 KB	50%	14/03/2019 5:33
SECURITY	File	1 KB	No	2 KB	51%	14/03/2019 5:33
socat	Application	120 KB	No	298 KB	60%	14/03/2019 5:33
VERSION	File	1 KB	No	1 KB	0%	14/03/2019 5:33

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

Name	Date modified
WIN_socat-1.7.3.2-32bit	27/09/2021 7:22 AM
WIN_socat-1.7.3.2-64bit	27/09/2021 7:22 AM
BUGREPORTS	27/09/2021 7:22 AM
CHANGES	27/09/2021 7:22 AM
COPYING	27/09/2021 7:22 AM
EXAMPLES	27/09/2021 7:22 AM
FAQ	27/09/2021 7:22 AM
msys-2.0.dll	27/09/2021 7:22 AM
msys-crypto-1.0.0.dll	27/09/2021 7:22 AM
msys-ncursesw6.dll	27/09/2021 7:22 AM
msys-readline7.dll	27/09/2021 7:22 AM
msys-ssl-1.0.0.dll	27/09/2021 7:22 AM
msys-z.dll	27/09/2021 7:22 AM
README	27/09/2021 7:22 AM
SECURITY	27/09/2021 7:22 AM
socat.exe	27/09/2021 7:22 AM
UNIX_socat-1.7.3.4.tar.gz	6/03/2021 11:33 AM
VERSION	27/09/2021 7:22 AM
WIN_socat-1.7.3.2-32bit.zip	27/09/2021 11:33 AM
WIN_socat-1.7.3.2-64bit.zip	6/03/2021 11:33 AM



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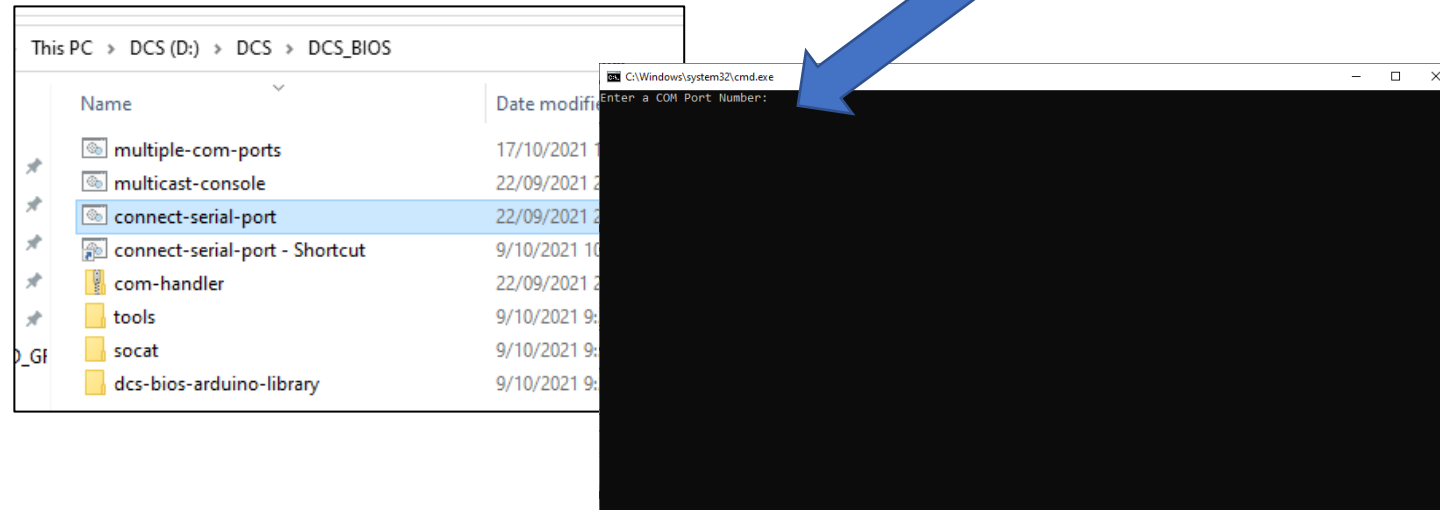
# RUNNING DCS-BIOS (FLIGHT PANELS VERSION)

## 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.



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

# RUNNING DCS-BIOS (FLIGHT PANELS VERSION)

## CONNECTING TO MULTIPLE ARDUINOS

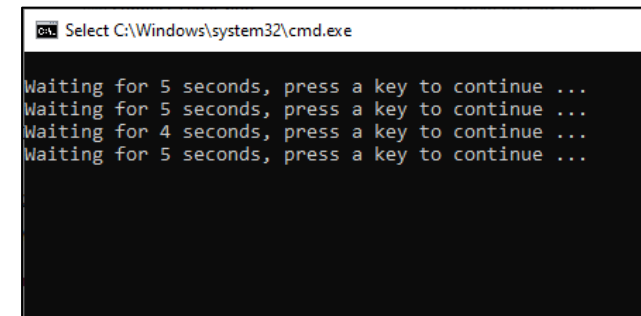
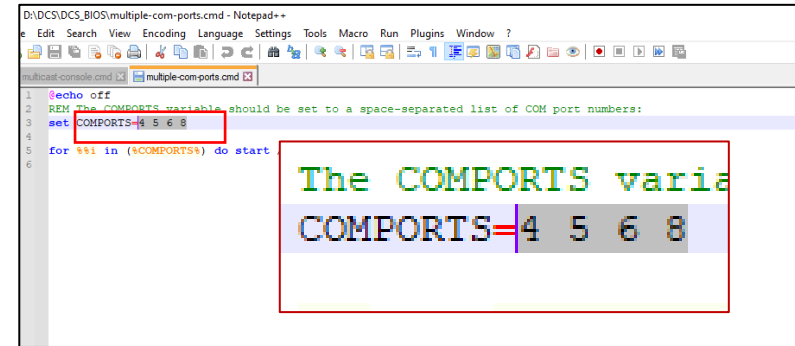
LOCATE THE “COM PORT NUMBERS” FOR THE ARDUINOS CONNECTED TO THE PC. THIS CAN BE DONE VIA THE ARDUINO APP OR DEVICE MANAGER.

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++

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


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 NOTEPAD TO UPDATE THE “**multi-coms-ports**”



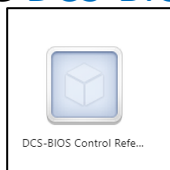
# RUNNING DCS-BIOS (FLIGHT PANELS VERSION)

## DCS-BIOS CONTROL REFERENCES

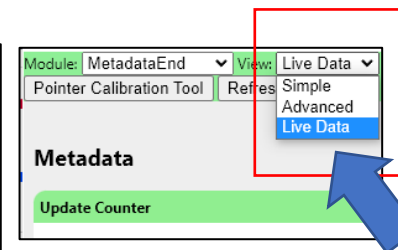
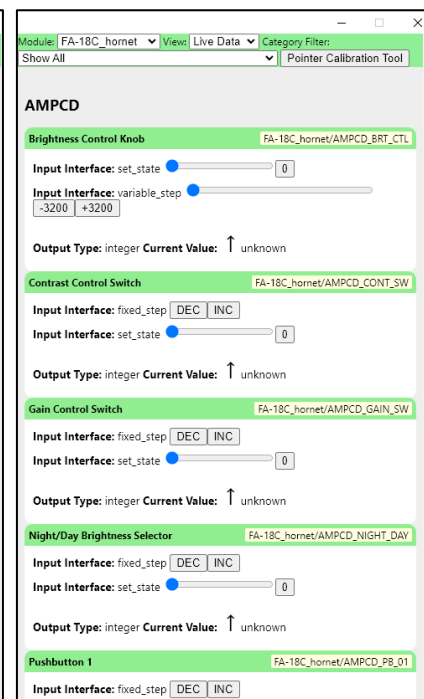
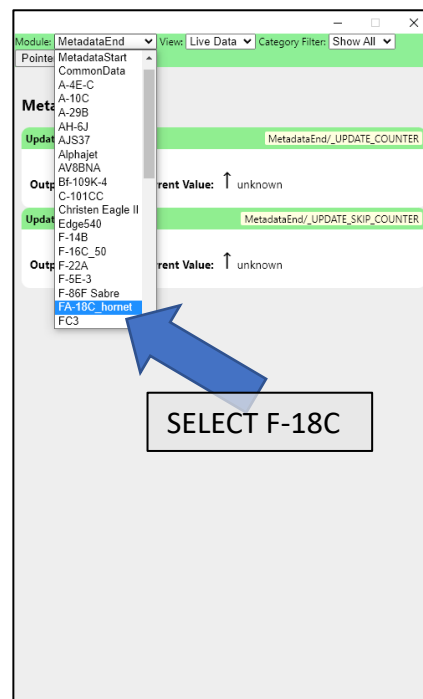
EITHER TYPE <chrome://apps/> INTO THE COMMAND LINE  
OR  
CLICK  ICON

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

