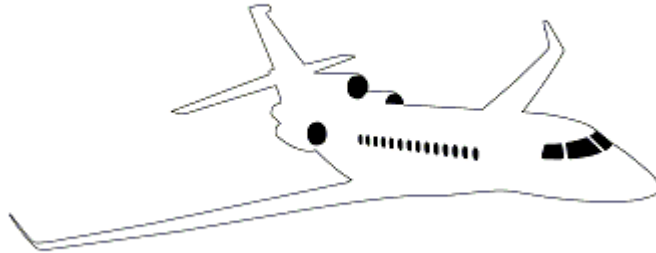


FALCON SERVICE BULLETIN

FALCON 8X



No 509

SEPTEMBER 15, 2021

ATA 27

**FLIGHT CONTROLS
MODULAR ELECTRONIC FLIGHT CONTROL SYSTEM
MAIC SOFTWARE UPDATE**

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FALCON 7X**7X -509**

**FLIGHT CONTROLS
MODULAR ELECTRONIC FLIGHT CONTROL SYSTEM
MAIC SOFTWARE UPDATE**

Initial issuance

March 29, 2021

List of effective pages:
1 to 7

Erratum

September 15, 2021

List of effective pages:
1 to 8

REASON: DASSAULT AVIATION FCS data loading procedure DT EQUIP 43913 updated.

FALCON 7X**7X -509**

**FLIGHT CONTROLS
MODULAR ELECTRONIC FLIGHT CONTROL SYSTEM
MAIC SOFTWARE UPDATE**

1. PLANNING INFORMATION**A. EFFECTIVITY**

This Service Bulletin is applicable to FALCON 8X aircraft with serial numbers 402 and subsequent:

- that have implemented DASSAULT AVIATION modification M1655 or Service Bulletin 7X-412 ,
- that have not previously implemented DASSAULT AVIATION modification M1811.

B. REASON

The purpose of this Service Bulletin is to change the compatibility table of the Digital Flight Control System in order to enable installation of the latest SFCC and MFCC modules on in-service 8X aircraft.

C. DESCRIPTION

The operation consists in uploading a new software in the MAIC modules.

CAUTION: UPLOADING OF MAIC XA MODULES (1402CZ)/(1202CZ)/(601CZ)/(401CZ) MUST BE PERFORMED BY AN OPERATOR AUTHORIZED BY THE COMPONENT MANUFACTURER "DASSAULT EQUIPEMENTS", AFTER SPECIFIC TRAINING.

D. COMPLIANCE

If you choose to comply with this Service Bulletin, accomplishment can be performed at your convenience.

E. APPROVAL

This Service Bulletin covers DASSAULT AVIATION modification FALCON 8X M1968 that has been approved by EASA.

The technical content of this document is approved under the authority of the DOA ref. EASA.21J.051.

F. LABOR

Estimated labor-hours: Refer to Service Bulletin Commercial Summary.

NOTE: These labor-hours only concern the work described in this Service Bulletin and do not include other maintenance work that may be performed on this occasion.

FALCON 7X
7X -509
G. MATERIAL - PRICE AND AVAILABILITY

The modification kit may be obtained from either address listed below:

Western hemisphere: DASSAULT FALCON JET CORP.
 SPARES DISTRIBUTION CENTER
 200 RISER ROAD
 LITTLE FERRY, NJ 07643 U.S.A.
 Telephone:
 • CANADA and U.S.A.: 1-800-800-4036
 • MEXICO: 001-800-800-4036
 • Other countries: 1-201-541-4809
 Email to: Customer.Care@DassaultFalconJet.com

Other continents: DASSAULT AVIATION
 Falcon Spares
 54, AVENUE MARCEL DASSAULT
 B.P. 24
 33701 MERIGNAC Cedex (FRANCE)
 Telephone: 33 (0)5.56.18.44.44
 Email to: dafsorders@dassault-aviation.com

Price and availability on request.

H. TOOLING

- TOOL BOX (**TO-20-008**).
- maintenance computer (**TO-45-100**).

CAUTION: IF USING TOOL P/N MEM405-02, THE COMPUTER MUST HAVE WINDOWS 7 (32 BITS) OR PREVIOUS VERSIONS ONLY.

TOOL P/N MEM405-02 IS NOT COMPATIBLE WITH WINDOWS 7 (64 BITS) OR LATER VERSIONS.

TOOLS P/N MEM405-03 AND P/N MEM405-04 ARE COMPATIBLE WITH WINDOWS 7 64 BITS.

- Refer to paragraph 3.B. MATERIAL INFORMATION.
- Standard USB cable.

I. WEIGHT AND BALANCE

Change in weight: None.

Change in balance with respect to 25% MAC: None.

J. REFERENCES

Aircraft Maintenance Manual:

- GENERAL MAINTENANCE AND SAFETY PRECAUTIONS (Refer to **TASK 20-00-00-910-801**)
- USE OF THE AIRCRAFT MAINTENANCE PROCEDURES (Refer to **TASK 20-00-00-910-803**)

FALCON 7X**7X -509**

- GROUND TEST OF THE FCS (Refer to [TASK 27-00-00-700-802](#))
- FUNCTIONAL TEST OF THE FLIGHT CONTROL SYSTEM WITHOUT HYDRAULIC POWER (Refer to [TASK 27-00-00-720-802](#))
- TEST OF THE FCS MODULES (Refer to TASK 27-90-01-700-801) until revision 21 then (Refer to [TASK 27-90-00-700-801](#))
- PRESSURIZATION / DE-PRESSURIZATION OF THE HYDRAULIC SYSTEMS WITH THE HYDRAULIC GROUND POWER UNIT (GPU) (Refer to [TASK 29-00-00-860-803](#))
- USE OF THE CENTRAL MAINTENANCE COMPUTER (CMC) - QUICK REFERENCE HANDBOOK (Refer to [TASK 45-10-00-910-801](#))

Fault Isolation Manual:

- AIRCRAFT SERIAL LINKS (Refer to [SDS 27-90-01 \(FIM\)](#))
- TROUBLESHOOTING PROCEDURE FOR THE FCS (Refer to [TASK 27-00-00-810-901 \(FIM\)](#))

K. OTHER PUBLICATIONS AFFECTED

The following publication will be revised at a later date to include the changes introduced by this Service Bulletin:

- Illustrated Parts Catalog.

FALCON 7X
7X -509
2. ACCOMPLISHMENT INSTRUCTIONS
A. GENERAL INSTRUCTIONS AND SAFETY PRECAUTIONS

- (1) Obey the general maintenance and safety precautions (Refer to [TASK 20-00-00-910-801](#)).

B. PRELIMINARY STEPS

- (1) The aircraft must be in the maintenance configuration (Refer to [TASK 20-00-00-910-803](#)).
- aircraft on wheels,
 - no other work performed on electrical systems and landing gears.
- (2) Perform the ground test of the FCS (Refer to [TASK 27-00-00-700-802](#) - "JOB SET-UP" and "PROCEDURE"):
- If the amber "**FCS: TEST FAIL**" or "**CHECK STATUS**" CAS messages are displayed on the primary display unit at the end of the ground test, perform the FCS troubleshooting procedure (Refer to [TASK 27-00-00-810-901 \(FIM\)](#) - 4.B. thru 4.D.).
 - If no FCS related CAS and/or Fault messages are displayed, perform the "CLOSE-UP" paragraph of the FCS ground test (Refer to [TASK 27-00-00-700-802](#)) without disconnecting the GPUs.
- (3) Perform a check of the Electronic Unit P/N MEM40501-xx:
- Connect the Installation plug (MEM 40508-XX) to the Electronic Unit (MEM 40501-XX).
 - Connect the laptop to the Electronic Unit.
 - Click on "electronic unit check" in the program menu, "DASSAULT AVIATION" and "FCS Uploader" items.
 - Test of the USB devices begins:

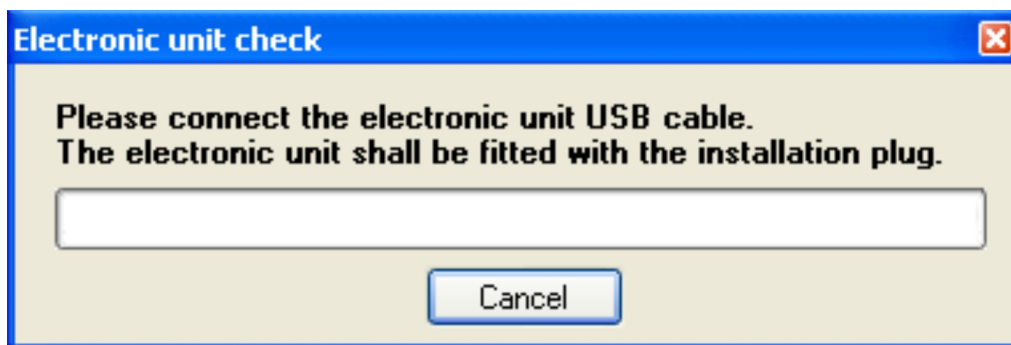


- If the test is successful, the following pop-up is displayed, click on "OK":



FALCON 7X
7X -509

- If the test is failed, the following pop-up message is shown:



You must return the uploader tool to Dassault Aviation for repair.

C. PROCEDURE

- (1) Upload the following modules (refer to DASSAULT AVIATION FCS data loading procedure DT EQUIP 43913 issue I):

CAUTION: UPLOADING MUST BE PERFORMED BY AN OPERATOR AUTHORIZED BY THE COMPONENT MANUFACTURER "DASSAULT EQUIPEMENTS" AFTER SPECIFIC TRAINING.

CAUTION: CHECK THE EXTRACTION TOOL (MGB660-XX) FOR CONDITION BEFORE COMMENCING UPLOADING (REFER TO FIGURE 1A BIS ON PAGE 11 OF THE FCS DATA LOADING PROCEDURE DT EQUIP 43913):

- CLAWS OF THE RODS (1) NOT BROKEN OR DAMAGED,
- FIXING SCREWS (2) PRESENT ON THE BOTTOM OF THE TOOL.

THE EXTRACTION TOOL MUST BE REPLACED IF AT LEAST ONE OF THESE CONDITIONS IS NOT MET.

- MAIC 1A module (**1402CZ**),
- MAIC 3A module (**1202CZ**),
- MAIC 2A module (**601CZ**),
- MAIC 4A module (**401CZ**),

- (2) As described in paragraphs 4.1.4 and 4.2.4 of DASSAULT AVIATION FCS data loading procedure DT EQUIP 43913 issue I, send the reports to CommandCenter@dassault-aviation.com.

D. TEST OF THE FLIGHT CONTROL SYSTEM MODULES

CAUTION: STRICTLY RESPECT THE FOLLOWING SEQUENCE.

- (1) Partially perform the test of the FCS modules using the hydraulic GPU (Refer to **TASK 27-90-00-700-801** - "Job set-up").

FALCON 7X
7X -509

- (2) Check the identification of the modules (Refer to [TASK 27-00-00-720-802](#) - "MODULE IDENTIFICATIONS").

MODULES	NEW P/N
MAIC 1A module (1402CZ)	ENS7X511-06
MAIC 2A module (601CZ)	ENS7X511-06
MAIC 3A module (1202CZ)	ENS7X511-06
MAIC 4A module (401CZ)	ENS7X511-06

- (3) Go to the 27-90 "AIRCRAFT SERIAL LINKS" maintenance screens (Refer to [TASK 45-10-00-910-801](#)) and verify that no failure exists between MAICx and MAUx modules (Refer to [SDS 27-90-01 \(FIM\)](#)).
- (4) Remove the four multi-function probe covers ([KPC3-780-45](#)).
- (5) Pressurize hydraulic system C (Refer to [TASK 29-00-00-860-803](#)).
- (6) On the overhead panel ([5000PM](#)), set the "PROBE 1+2" pushbutton ([R9810PM](#)), the "PROBE 3" pushbutton ([R9820PM](#)) and the "PROBE 4" pushbutton ([R9830PM](#)) to the ON position.
- (7) Perform the ground test of the FCS (Refer to [TASK 27-00-00-700-802](#) - "PROCEDURE").:
- If the amber "FCS: TEST FAIL" or "CHECK STATUS" CAS messages are displayed on the primary display unit at the end of the ground test, perform the FCS troubleshooting procedure (Refer to [TASK 27-00-00-810-901 \(FIM\)](#) - 4.B. thru 4.D).
 - If no FCS related CAS and/or Fault messages are displayed, perform the "CLOSE-UP" paragraph of the FCS ground test (Refer to [TASK 27-00-00-700-802](#)) without de-energizing the aircraft systems.

E. FINAL STEPS

- (1) Return the aircraft to the initial configuration.

F. DOCUMENTATION

- (1) Record the results of this Service Bulletin on the "NEW STANDARD INSTALLATION CHECKLIST" sheet attached.
- (2) Have the "NEW STANDARD INSTALLATION CHECKLIST" sheet signed by an aircraft inspector.
- (3) Send back the "NEW STANDARD INSTALLATION CHECKLIST" sheet and the "FIELD UPLOAD RECORD" to DASSAULT AVIATION at CommandCenter@dassault-aviation.com.

FALCON 7X**7X -509****G. RECORDING**

Record compliance with this Service Bulletin in the appropriate aircraft documents.

Fill out the electronic Service Bulletin reply form accessible from the "Service Bulletin" page on the Falcon portal or register SB implementation at Sbconfiguration@dassault-aviation.com, providing all useful information for aircraft identification:

- aircraft type and serial number,
- SB compliance: complete or section(s) applied,
- remarks,
- compliance date,
- service center.

FALCON 7X
7X -509
3. MATERIAL INFORMATION

NOTE: Compliance with this Service Bulletin by substituting the part numbers below with interchangeable subsequent part numbers (as per the Master List) is acceptable, provided that subsequent part numbers have the same effectivity as the original ones.

A. MODIFICATION OF MODULE PART NUMBERS

NEW P/N	QTY	DESIGNATION	OLD P/N
ENS7X511-06	1	MAIC 1A module (1402CZ)	ENS7X511-05
ENS7X511-06	1	MAIC 2A module (601CZ)	ENS7X511-05
ENS7X511-06	1	MAIC 3A module (1202CZ)	ENS7X511-05
ENS7X511-06	1	MAIC 4A module (401CZ)	ENS7X511-05

B. RENTAL TOOLS

MODULE UPLOADING		
P/N	QTY	DESIGNATION
MEM405-02 or -03 or -04 including: • MGB660-xx • MEM40501-xx • MEM40503-xx • MEM40504-xx • MEM40505-xx • MEM40506-xx • MEM40508-xx	1 • 1 • 1 • 1 • 1 • 1 • 1 • 1	FCS UPLOADER including: • Extraction tool • Electronic unit • Packing case • Hand-held scanner • LHF interface module • RHF interface module • Installation plug
DDM001-26 including: • DDM00101-26 • DDM00102-26	1 • 1 • 1	FCS 4.1.2 UPLOAD SUPPORT including: • FCS software media (std 4.1.2) • FCS label paperbook
MEM40507-03	1	CD installation media (Tool version 2.1.0.1)

NON PROTEGE



REFERENCE	ISSUE	DATE
DT EQUIP 43913	I	22/07/2021

Location :
N:\DA\SOC\NP\ORG\DDEQ\DIRTEC\DIRECTION\Dt
Equip\EQ43913_I.doc

Procedure

FCS DATA LOADING PROCEDURE

SCOPE

Falcon 7X
Falcon 8X

Dassault Equipements – Direction Technique

<i>Edition</i>	<i>Date</i>	<i>Issue</i>	<i>Author</i>	<i>Verification</i>	<i>Approbation</i>
<i>Origin</i>	17/02/2010		F. GUILLEMOT	ORIGINAL SIGNED	ORIGINAL SIGNED
<i>Last Edition</i>	22/07/2021	I	D. PETTEX		
				Flavien GUILLEMOT	Jérôme CAPPELLE

TABLE OF CONTENTS

1. PREAMBLE	3
1.1 Document issues	3
1.2 List of updated pages	3
1.3 Summary	3
2. PURPOSE OF THE DOCUMENT.....	4
3. INTRODUCTION	5
3.1 Purpose of the procedure	5
3.2 Reference documents.....	5
3.2.1 AMM documents	5
3.2.2 Authorities Documents	5
3.3 Tooling configuration	6
3.4 Energy	6
3.5 Access	6
3.6 List of acronyms	7
3.7 Operators skills	7
3.8 Uploading estimated times	7
3.8.1 LH Front modules	7
3.8.2 RH Front modules.....	7
4. PROCEDURE.....	8
4.1 Software LH FRONT Rack uploading	8
4.1.1 Initialization (fig 1).....	10
4.1.2 Uploading	15
4.1.3 Sticking of labels	40
4.1.4 Printing of report (fig 3)	41
4.1.5 Close-up LH FRONT Rack.....	45
4.2 Software RH FRONT Rack uploading.....	46
4.2.1 Initialization (fig 2).....	48
4.2.2 Uploading	52
4.2.3 Sticking of labels	73
4.2.4 Printing of report (fig 4)	74
4.2.5 Close-up RH FRONT Rack	77
4.3 Check of the Software P/N after uploading	78

1. PREAMBLE

1.1 Document issues

Date	Index	Author	Updating Purpose
17/02/2010		F. GUILLEMOT	First issue
08/03/2010	A	F. GUILLEMOT	Updates following the DTC remarks
22/04/2010	B	F. GUILLEMOT	Updates after functional test on A/C
17/05/2010	C	F. GUILLEMOT	Updates following the DTC remarks
28/05/2010	D	F. GUILLEMOT	Updates after SB-114 performed on A/C 66 at DFS
27/10/2014	E	F. GUILLEMOT	Update tool version Updates following the DTC remarks
22/06/2015	F	F. GUILLEMOT	Update tools P/N
01/12/2017	G	F. GUILLEMOT	Updates after SB 436 performed at DFJ/JAB
26/03/2018	H	F. GUILLEMOT	Update for upload optimization
22/07/2021	I	D. PETTEX	Update for using extraction tool

1.2 List of updated pages

All the pages of this document are at the latest issue.

3, 10

1.3 Summary

FCS Data loading procedure for F7X and F8X.

2. PURPOSE OF THE DOCUMENT

The goal of the document is to describe the data loading procedure for the FCS of the F7X and F8X.

3. INTRODUCTION

3.1 Purpose of the procedure

NOTE : Before uploading operations, perform a check of the Electronic Unit P/N MEM 40501-xx as per DT EQUIP 44150 para 3.8.

This task gives the data loading procedure for the field loadable modules of the FCS of the F7X:

- MFCC
- SFCC
- MAIC

This procedure is to perform on a FCS installed on aircraft: Repair center or production line
The associated Service Bulletin (SB) will give specific information as specific items to follow for FCS standard to upload

It references aircraft level instructions, which must be provided by the aircraft Service Bulletin

CAUTION:

To perform this FCS data loading procedure, the A/C shall be without FCS failures
It is forbidden to use "FCS ENGAGE" push button during the FCS Data loading procedure

3.2 Reference documents

3.2.1 AMM documents

The following tasks are available on Falcon Portal (AMM documentation - Field F7X):

20-30-00-910-803 Electrostatic discharge (ESD) standard practices
24-00-00-860-801 Energization / de-energization of the aircraft
24-00-00-860-806 Opening / Closing of the SSPC
24-00-00-860-807 Opening / Closing of the circuit breakers
24-34-13-960-801 Replacement of the PMA converter fuses
25-13-13-900-801 Removal / Installation of the cockpit linings
27-90-01-900-801 Removal / Installation of the LH Front FCS modules
27-90-01-900-803 Removal / Installation of the RH Front FCS modules

3.2.2 Authorities Documents

DO178B – Software considerations in Airborne systems and Equipment Certification

CRI F-10 – FLS requirements (in particular the check of the Sw P/N after uploading)

3.3 Tooling configuration

TO-20-008 TOOL BOX

MEM 405-xx FCS UPLOADER TOOL including:

- MEM 40501-xx ELECTRONIC UNIT
- MEM 40503-xx PACKING CASE
- MEM 40504-xx HAND HELD SCANNER
- MEM 40505-xx LHF INTERFACE MODULE
- MEM 40506-xx RHF INTERFACE MODULE
- MEM 40508-xx INSTALLATION PLUG
- MGB 660-xx EXTRACTION TOOL
- SPECIFIC USB CABLE

For each new standard installation, DDM001-xx FCS UPLOAD SUPPORT including:

- DDM00101-xx FCS SOFTWARE MEDIA
- DDM00102-xx FCS LABELS PAPERBOOK

LAPTOP PC equipped with software application installed with the MEM40507-xx INSTALLATION MEDIA (Tool version x.x.x.x)

The complete P/N with “xx” updated will be specified in the associated SB.

3.4 Energy

ELECTRICAL

3.5 Access

These access procedures are available on Falcon Portal (AMM documentation - Field 7X):

- 221XZ Cockpit lateral lining n° 5
- 221YZ Cockpit lateral lining n° 6
- 222XZ Cockpit lateral lining n° 5

222YZ Cockpit lateral lining n° 6

3.6 List of acronyms

A/C : Aircraft
AMM : Aircraft Maintenance Manual
FBW : Fly By Wire
CMC : Centralized Maintenance Computer
FCS : Flight Control System
LHF : Left Hand Front
MAIC : Maintenance and Avionic Interface Computer
MDU : Multifunction Display Unit
MFCC : Main Flight Control Computer
RHF : Right Hand Front
SB : Service Bulletin
SFCC : Secondary Flight Control Computer
SPDB : Secondary Power Distribution Box

3.7 Operators skills

This procedure shall always be performed by an operator authorized by the component manufacturer DASSAULT EQUIPEMENTS after a training performed by DASSAULT EQUIPEMENTS teams.

This operator will sign the field upload report.

An inspector will sign the SB report when the installation of the new FCS standard has been fully completed.

3.8 Uploading estimated times

3.8.1 LH Front modules

- MAIC 2A / MAIC 4A : up to 8' per module (about 16').
- MFCC 1 (AB) / MFCC 2 (AB) / MFCC 3 (AB) : up to 6' per module (about 36').

3.8.2 RH Front modules

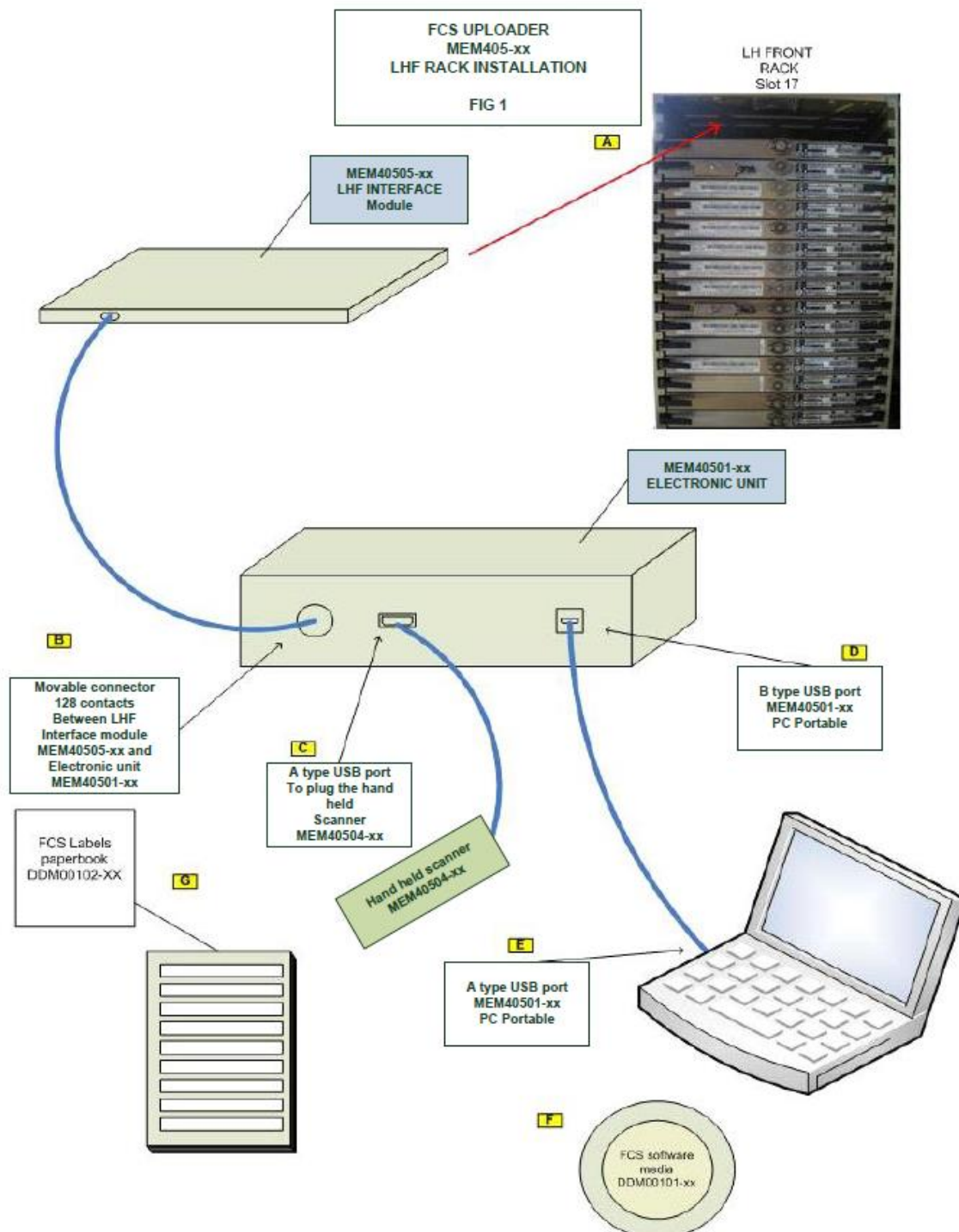
- MAIC 1A / MAIC 3A : up to 8' per module (about 16').
- SFCC 1 / 2 / 3 : up to 5' per module (about 15').

4. PROCEDURE

4.1 Software LH FRONT Rack uploading

NOTE: see hereafter the LHF Rack layout.

LHF				
<i>Power Supplies</i>				
E2 E3 E4				
Slot #	TOP	ATA #	P/N	CFI
17	Spare	27-01-1700	-	
16	Spare	27-01-1600	-	
15	LHF_PWR3	27-01-1500	00A050-xx	(1501CZ)
14	FDC4-B	27-01-1400	0877X302-xx	(1401CZ)
13	MFCC3_A	27-01-1300	ENS7X101-xx	(1301CZ)
12	MFCC3_B	27-01-1200	ENS7X102-xx	(1201CZ)
11	MFCC2_A	27-01-1100	ENS7X101-xx	(1101CZ)
10	MFCC2_B	27-01-1000	ENS7X102-xx	(1001CZ)
9	MFCC1_A	27-01-0900	ENS7X101-xx	(901CZ)
8	MFCC1_B	27-01-0800	ENS7X102-xx	(801CZ)
7	FDC2-B	27-01-0700	0877X302-xx	(701CZ)
6	MAIC2_A	27-01-0600	ENS7X501-xx	(601CZ)
5	MAI_2	27-01-0500	0877X502-xx	(501CZ)
4	MAIC4_A	27-01-0400	ENS7X501-xx	(401CZ)
3	MAI_4	27-01-0300	0877X502-xx	(301CZ)
2	LHF_PWR2	27-01-0200	00A050-xx	(201CZ)
1	LHF_PWR4	27-01-0100	00A050-xx	(101CZ)
BOTTOM				



4. PROCEDURE

9

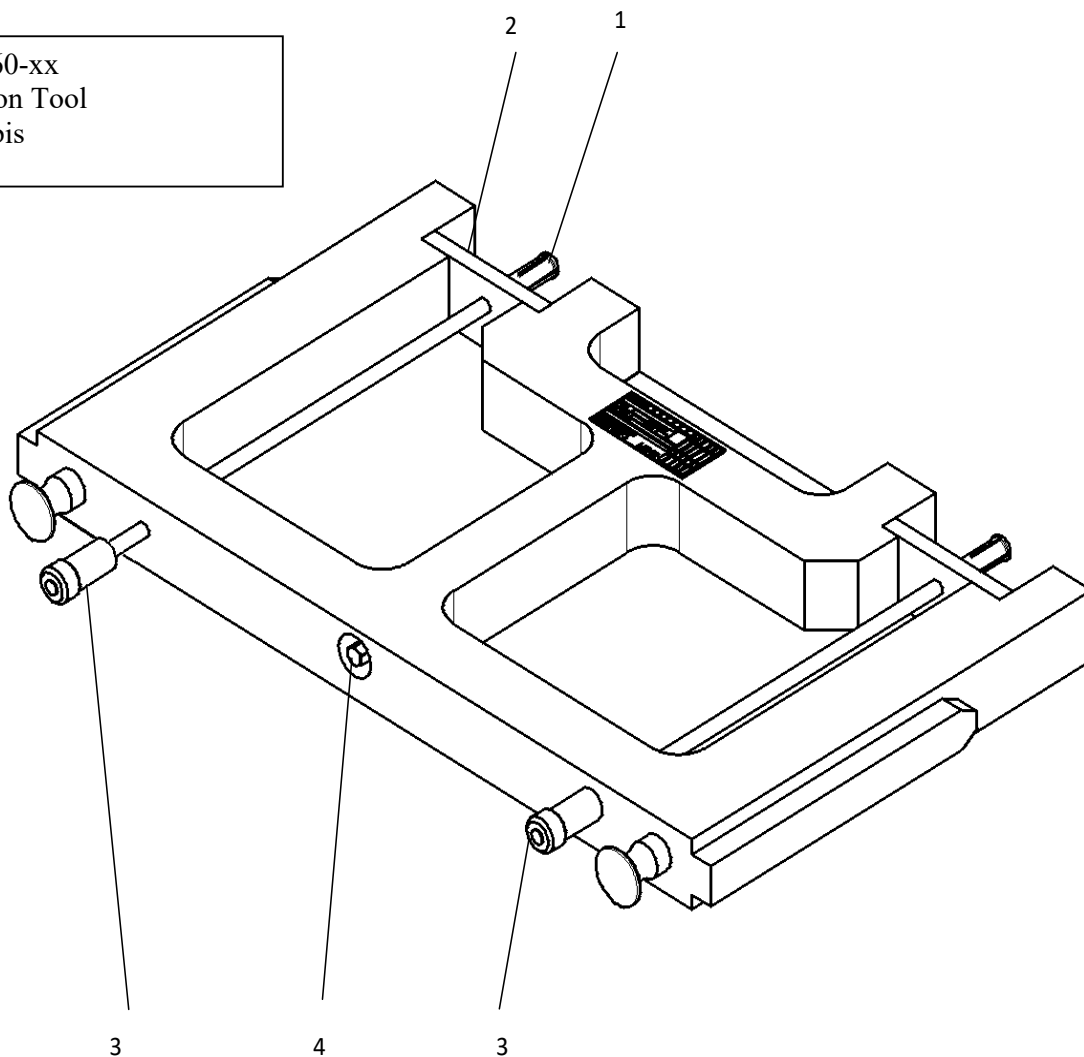
4.1.1 Initialization (fig 1)

- No electrical energy (refer to 24-00-00-860-801).
- Get the labels paperbook (DDM00102-xx) (fig 1-G) with the related modules identification labels.
- Connect the "uploading" laptop PC to the local means (electrical connection AC 110V/220V) if its own battery is not charged enough to ensure full time uploading (roughly 1H20mn).

NOTE: Interruption during uploading will cause depot level return for the related modules

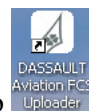
- Remove the linings 221XZ - 221YZ (refer to 25-13-13-900-801)
- Open the LH FRONT Rack (refer to 27-90-01-900-801 para 3)
- Start the uploading laptop PC (be sure that screen and hard drive stand-by mode are disabled) and insert the FCS software media (DDM00101-xx) (fig 1-F),
- Extract the plug from slot 17 with the extraction tool (MGB 660-xx) (fig 1-A bis)
 - Before to insert the tool, check the condition of the claws of the rods (1) (no broken or damaged claws) also check if the fixing screws (2) are present on the bottom of the tool
 - NOTE : if the tool do not comply with these conditions of use, then another tool must be used.
- Pull the rods (3) to the stop position
- Insert the tool into slot 17 and push the rods (3) to the stop position
- Extract the flight plug by loosening the drive screw (4)

MGB 660-xx
 Extraction Tool
 Fig 1A bis



- Insert and screw in slot 17 the LHF module interface (**MEM 40505-xx**) (fig 1-A)
- Plug the 128 contact movable connector from the LHF module interface (**MEM 40505-xx**) on the fixed 128 contact connector of the Electronic Unit (**MEM 40501-xx**) (fig 1-B)
- Plug the hand-held scanner (**MEM 40504-xx**) on the A type USB port of the Electronic Unit (**MEM 40501-xx**) (fig 1-C)
- Connect the cable between B type USB port plug of Electronic Unit (**MEM 40501-xx**) to the A type USB port plug of uploading laptop PC (fig 1-D / fig 1-E)
- Open J7 breaker (LF E3 - **113CZ**) on the LH front SPDB (**L1000PM**) (refer to **24-00-00-860-807**)

- Open K8 breaker (LF E4 - **314CZ**) on the RH front SPDB (**R1000PM**) (refer to **24-00-00-860-807**)
- On the maintenance panel (**1010TP**), set the TEST E1 switch (**R511CZ**) and TEST E2 switch (**L511CZ**) to the OFF position (DOWN)

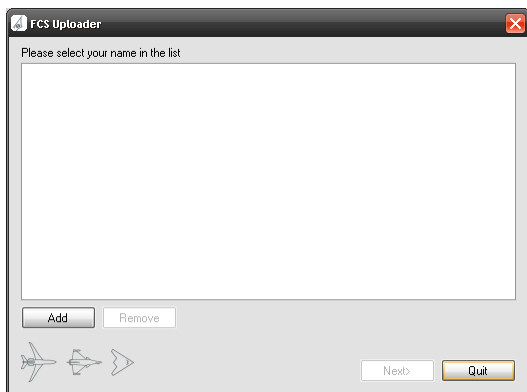


- Start the "FCS UPLOADER" application on the laptop (icon on the desktop)
 A dedicated welcome screen reminds the operator to check the different required connections to upload. A message drawing attention on the laptop running on its own battery can be displayed

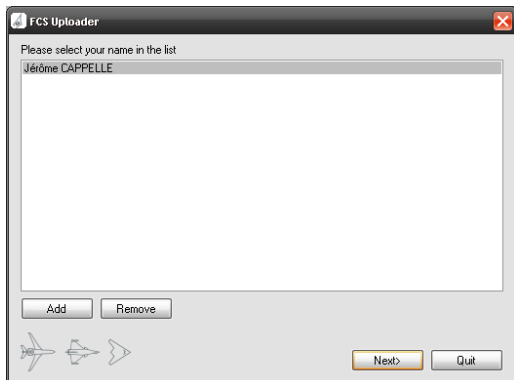
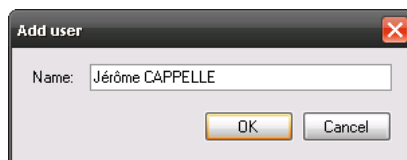
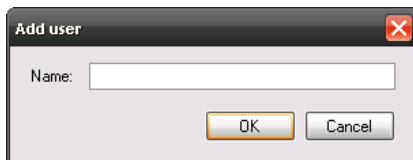
NOTE: the aircraft is de-energized.



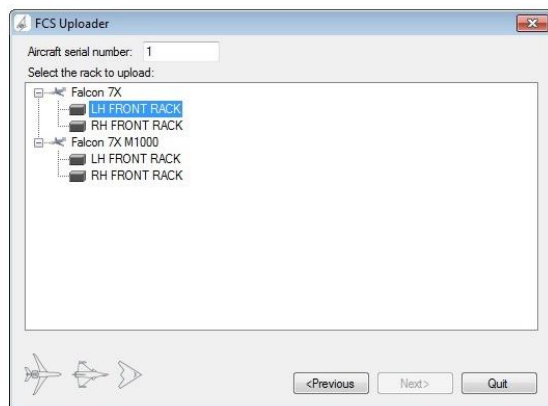
- Click on "Next"



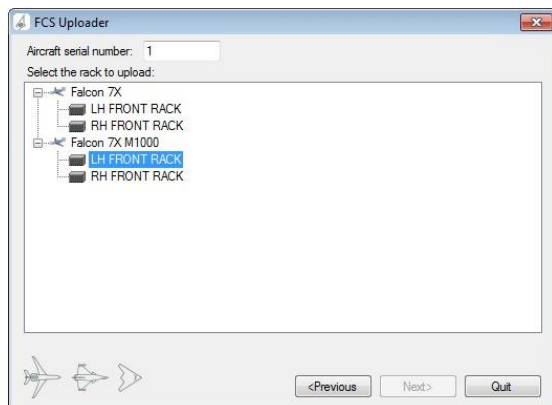
- Click on "Add" and enter the uploading operator's name



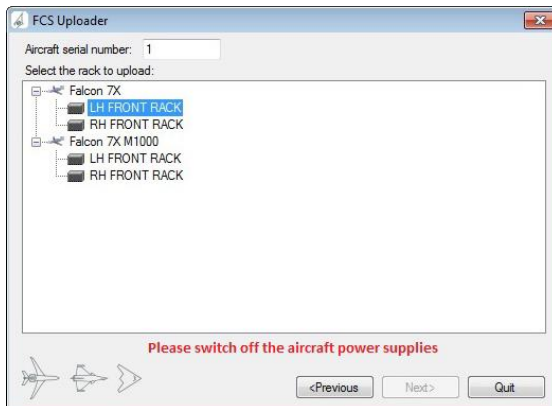
- Select your name in the list
- Click on "Next"
- Enter the aircraft serial number
- Select the LH FRONT RACK Falcon 7X or Falcon 7X M1000 (for F8X upload)



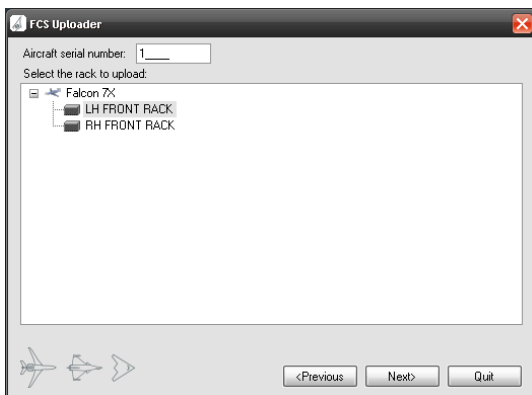
Example for 8X:



- If the aircraft power supplies are still "ON", this red message occurs



NOTE: This screen stays in this state until the application detects automatically power supplies switched off; then the following screen appears



NOTE: If aircraft is already not powered, only disconnect then reconnect the laptop USB cable.

- Click on "Next"

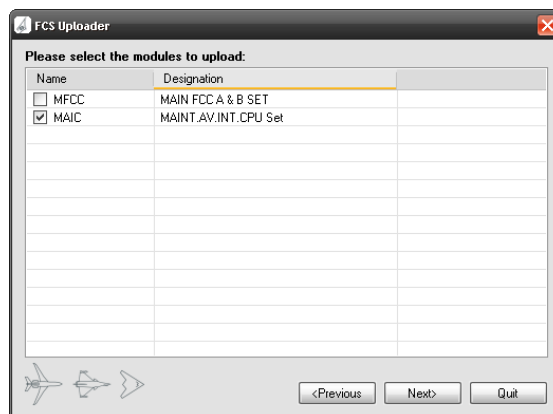
4.1.2 Uploading

Depending of the upload requested for the new standard as detailed in the SB, the operator could have to upload:

- MFCC and MAIC, go to chapter 4.1.2.3
- MFCC only, go to chapter 4.1.2.2
- MAIC only, go to chapter 4.1.2.1

4.1.2.1 Uploading MAIC 2A / MAIC 4A modules

- Notch the case MAIC

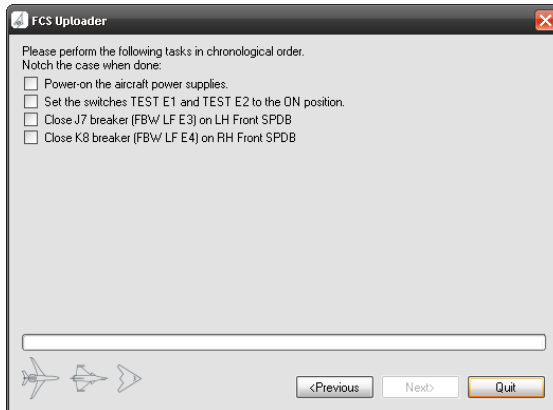


- Click on "Next"
- Perform the following steps in chronological order :
 - o Energize the aircraft (refer to 24-00-00-860-801)
 - o On the maintenance panel (1010TP) set the TEST E1 switch (R511CZ) and TEST E2 switch (L511CZ) to the ON position (UP position)

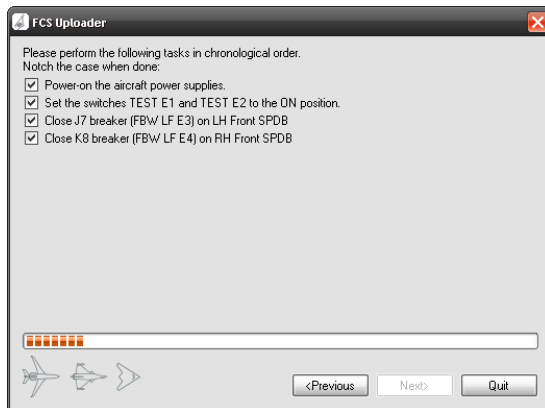
NOTE: wait 10 seconds between each interlocking of the power supplies E4-E3-E2-E1 and respect this sequence.

- Close J7 breaker (LF E3 - 113CZ) on the LH front SPDB (L1000PM) (refer to 24-00-00-860-807)
- Close K8 breaker (LF E4 - 314CZ) on the RH front SPDB (R1000PM) (refer to 24-00-00-860-807)

- Set the TEST E2 switch (L511CZ) to the OFF position, and then back to the ON position 10 seconds after. (no case to notch for this action)



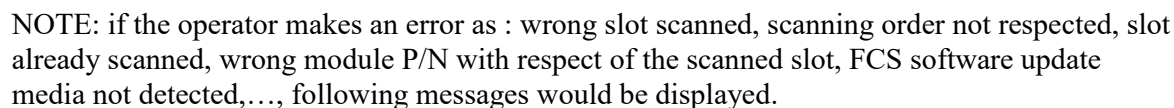
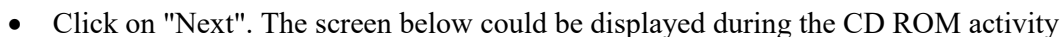
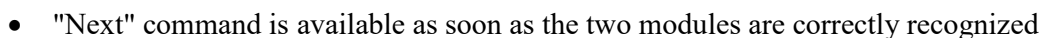
- Notch the case when done
- After electrical power supplies detection, the link between LH FRONT RACK and Electronic Unit (MEM40501-xx) is automatically done

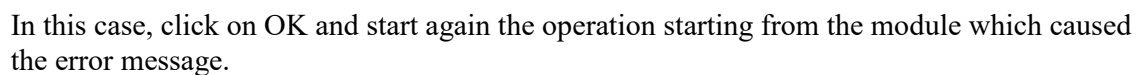


NOTE: During the link setting up, a bell-ringing like "DING/DONG" can be heard from the laptop.

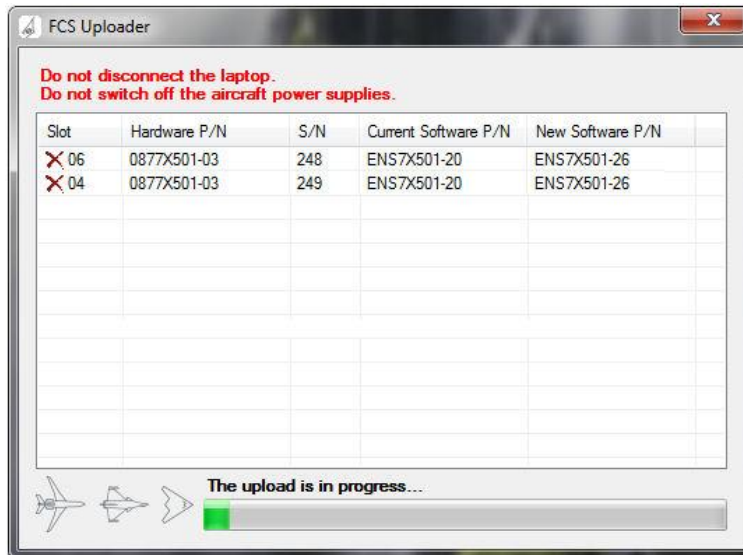
- Click on "Next" when the "Next" button is enable
- SCAN 1**: scan the labels of the modules MAIC2A (slot 6) and MAIC4A (slot 4) in the following order (to facilitate the scan, lift the left locking lever):

[illegible]



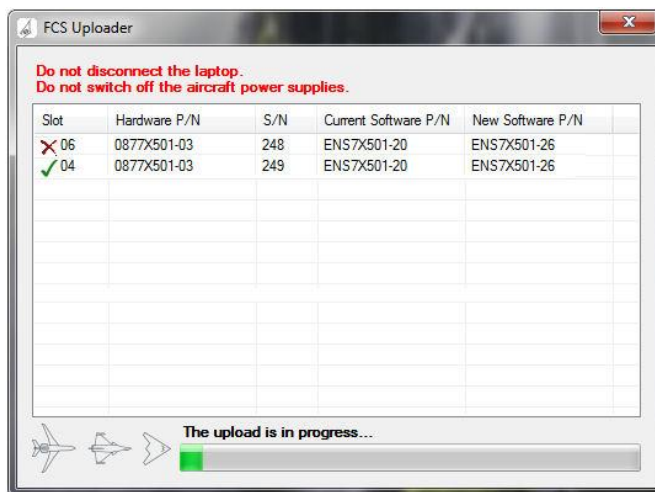


- [illegible]

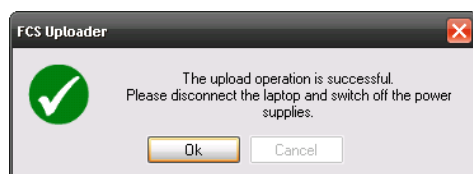
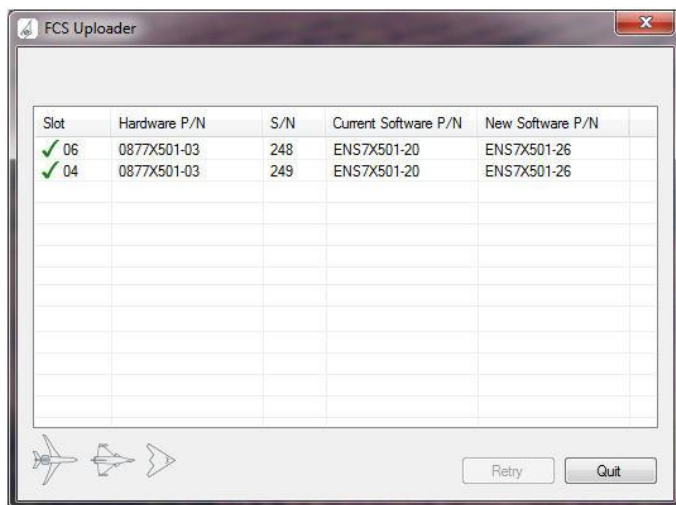


- When one or several slots are notched  click on "Retry" to re-start the related modules failed uploading sequences.

CAUTION: The operator can apply a "Retry". If the failure persists, close the application ("QUIT" button) and shut down the A/C, then perform the procedure again at the beginning (refer to section 4.1.1 "Initialization"). In that case log files will be erased. Please save first the "Module by Module" uploading reports available in the laptop directory: "My Documents \ Dassault-Aviation \ FCS Uploader \ Modules". In case of persistent failure, the related uploaded module is however new FCS standard upgraded but considered as faulty and must be replaced.



- The uploading procedure is successfully completed when the whole displayed slots are notched .



- Click on "Quit", the application "FCS UPLOADER" closes

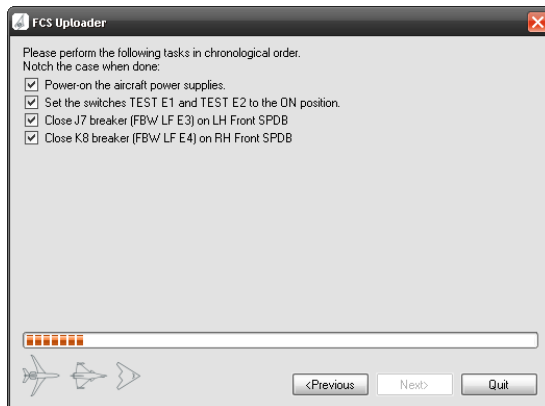
IMPORTANT :

Inside the LH FRONT RACK slot 6 and slot 4, unstick the MAIC2A and MAIC4A modules labels scanned at step **SCAN1**.
Then go to chapter 4.1.3.

4.1.2.2 Uploading MFCC 1A/B - MFCC 2A/B - MFCC 3A/B modules

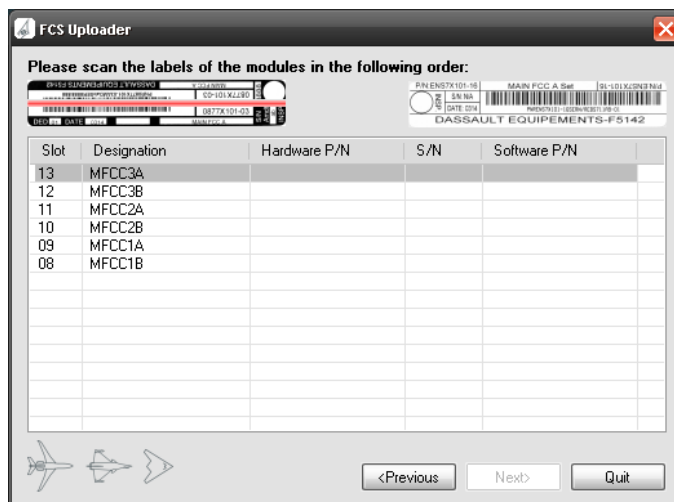
- Notch the case MFCC

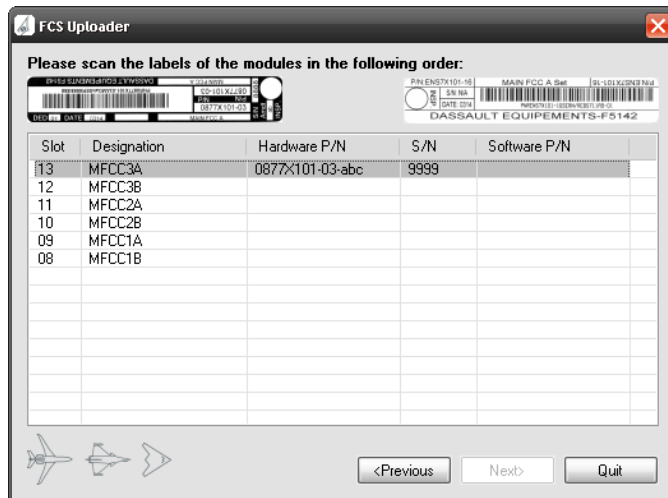
- After electrical power supplies detection, the link between LH FRONT RACK and Electronic Unit (**MEM40501-xx**) is automatically done.



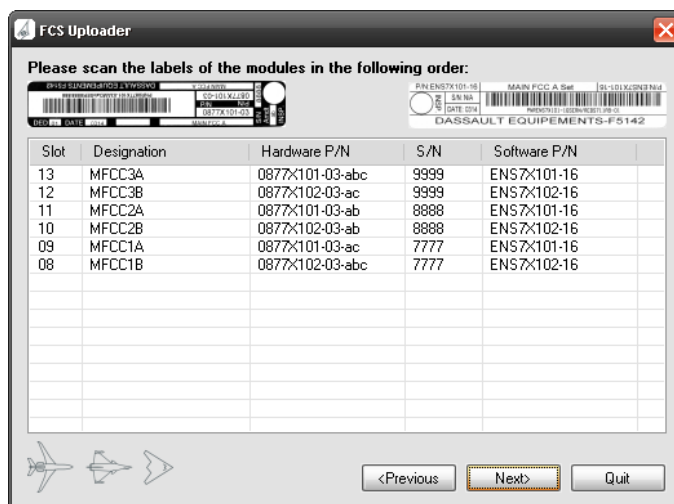
NOTE: During the link setting up, a bell-ringing like "DING/DONG" can be heard from laptop.

- Click on "Next" when the "Next" button is enable.
- SCAN 1**: scan the labels of the modules MFCC3A (slot 13), MFCC3B (slot12), MFCC2A (slot 11), MFCC2B (slot 10), MFCC1A (slot 9) and MFCC1B (slot 8) in the following order : (to facilitate the scan, lift the left locking lever).





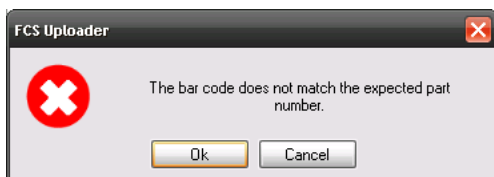
- "Next" command is available as soon as the six modules are correctly recognized.



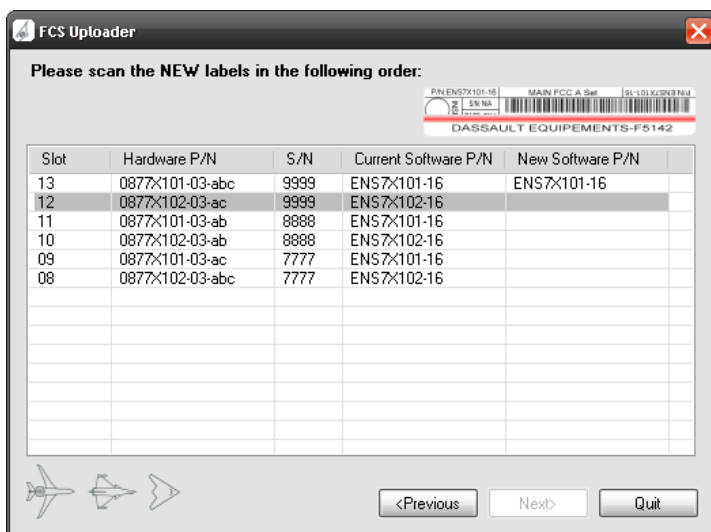
- Click on "Next". The screen below could be displayed during the CD ROM activity

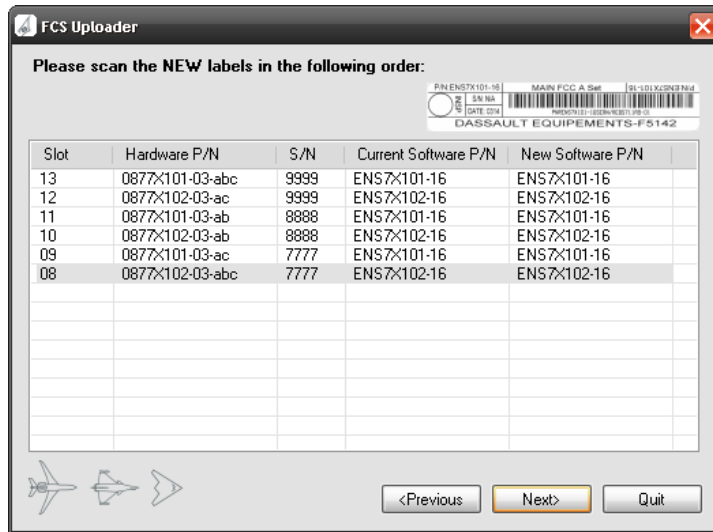


NOTE: If the operator makes an error as : wrong slot scanned, scanning order not respected, slot already scanned, wrong module P/N with respect of the scanned slot, FCS software update media not detected,..., following messages would be displayed



- **SCAN 2** : Scan the labels MFCC3A, MFCC3B, MFCC2A, MFCC2B, MFCC1A and MFCC1B on the related FCS labels paperbook (DDM00102-xx).





Please scan the NEW labels in the following order:

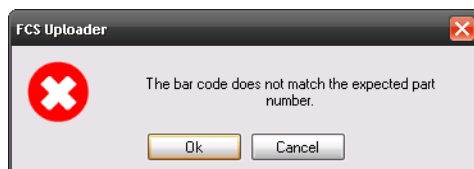
Slot	Hardware P/N	S/N	Current Software P/N	New Software P/N
13	0877X101-03-abc	9999	ENS7X101-16	ENS7X101-16
12	0877X102-03-ac	9999	ENS7X102-16	ENS7X102-16
11	0877X101-03-ab	8888	ENS7X101-16	ENS7X101-16
10	0877X102-03-ab	8888	ENS7X102-16	ENS7X102-16
09	0877X101-03-ac	7777	ENS7X101-16	ENS7X101-16
08	0877X102-03-abc	7777	ENS7X102-16	ENS7X102-16

<Previous **Next>** Quit

- Click on "Next".

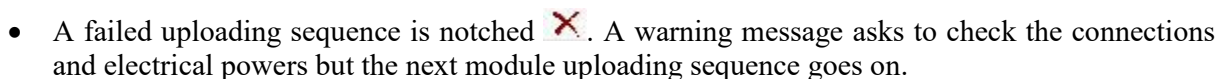
Column "NEW P/N" is automatically fed with scanned MFCC3A, MFCC3B, MFCC2A, MFCC2B, MFCC1A and MFCC1B label informations from related FCS standard labels paperbook.

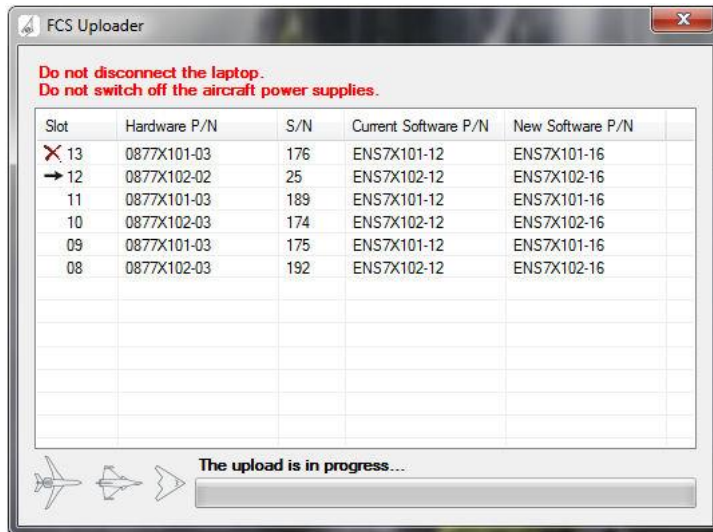
- NOTE:** If the scanned P/N on the new label doesn't match with the one expected in the column "NEW P/N", the following message is displayed. In this case click "OK" and start again the operation starting from the module which caused the error message.



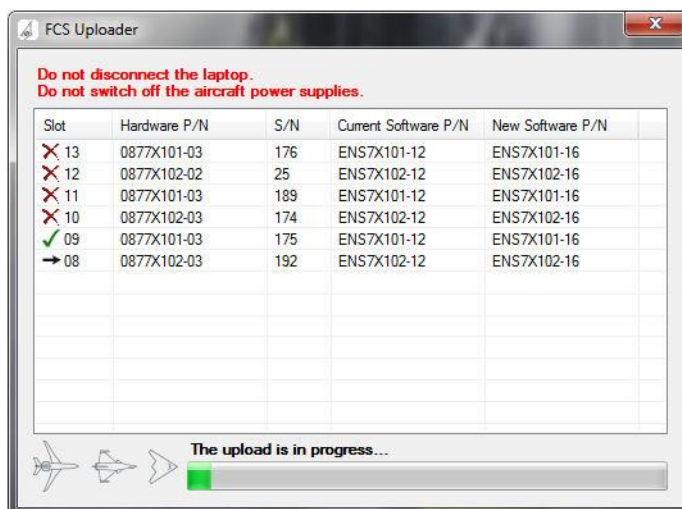
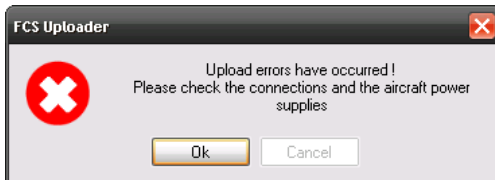
Bar code reading is finished.
A message warns that an uploading operation is to begin.

NOTE: If you click on "NO", uploading is aborted and the application goes back to screen **SCAN 2**



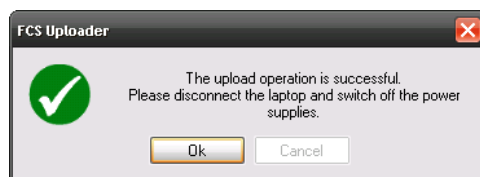
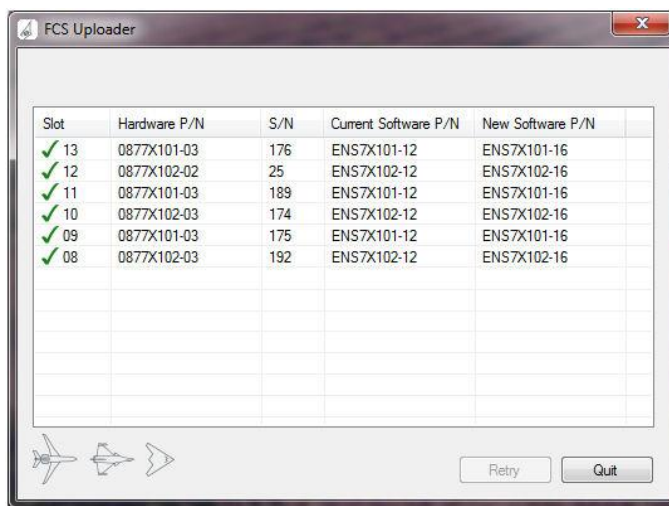


- When one or several slots are notched ✗ click on "Retry" to re-start the related modules failed uploading sequences.



CAUTION: The operator can apply a "Retry". If the failure persists, close the application ("QUIT" button) and shut down the A/C, then perform the procedure again at the beginning (refer to section 4.1.1 "Initialization"). In that case log files will be erased. Please save first the "Module by Module" uploading reports available in the laptop directory: "My Documents \ Dassault-Aviation \ FCS Uploader \ Modules". In case of persistent failure, the related uploaded module is however new FCS standard upgraded but considered as faulty and must be replaced.

- The uploading procedure is successfully completed when the whole displayed slots are notched ✓



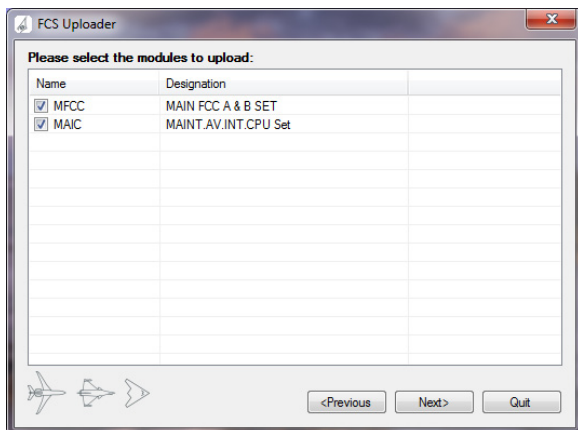
- Click on "Quit", the application "FCS UPLOADER" closes

IMPORTANT :

- Inside the LH FRONT RACK slot 13, 12, 11, 10, 09 and 08, unstick the MFCC3A, MFCC3B, MFCC2A, MFCC2B, MFCC1A and MFCC1B modules labels scanned at step **SCAN1**. Then go to chapter 4.1.3.

4.1.2.3 Uploading MAIC 2A - MAIC 4A - MFCC 1A/B - MFCC 2A/B - MFCC 3A/B modules

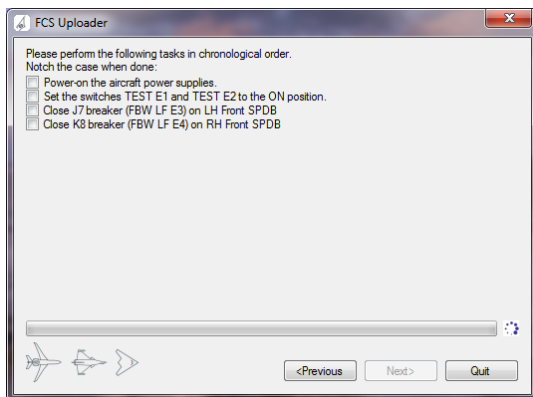
- Notch the cases MFCC and MAIC



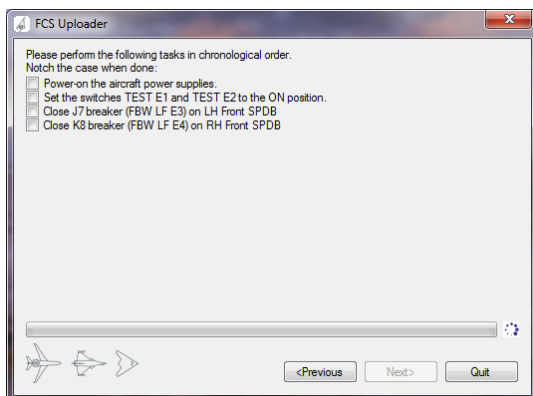
- Click on "Next"
- Perform the following steps in chronological order
 - ✚ Energize the aircraft (refer to 24-00-00-860-801).
 - ✚ On the maintenance panel (1010TP) set the TEST E1 switch (R511CZ) and TEST E2 switch (L511CZ) to the ON position (UP position).

NOTE: wait 10 seconds between each interlocking of the power supplies E4-E3-E2-E1 and respect this sequence.

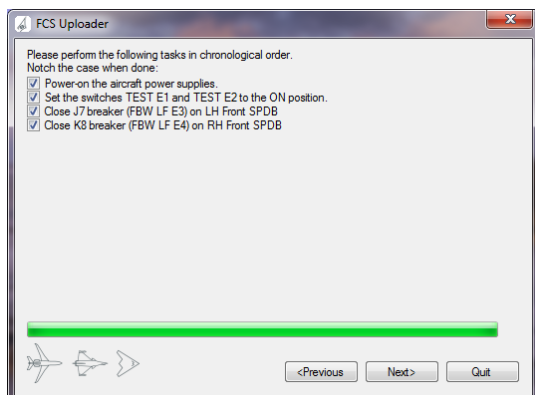
- Close J7 breaker (LF E3 - 113CZ) on the LH front SPDB (L1000PM) (refer to 24-00-00-860-807).
- Close K8 breaker (LF E4 - 314CZ) on the RH front SPDB (R1000PM) (refer to 24-00-00-860-807).
- Set the TEST E2 switch (L511CZ) to the OFF position, and then back to the ON position 10" after. (no case to notch for this action)



- Notch the case when done

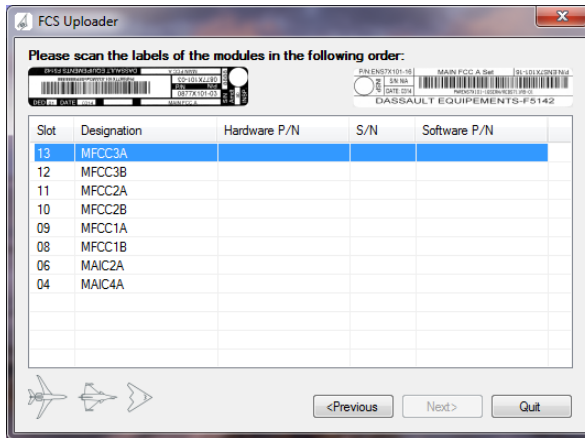


- After electrical power supplies detection, the link between LH FRONT RACK and Electronic Unit (**MEM40501-xx**) is automatically done.

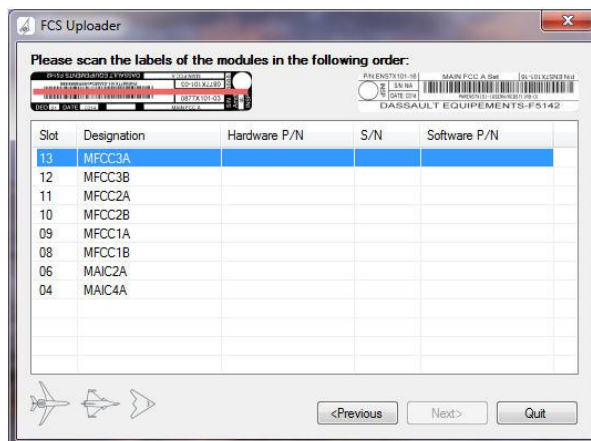


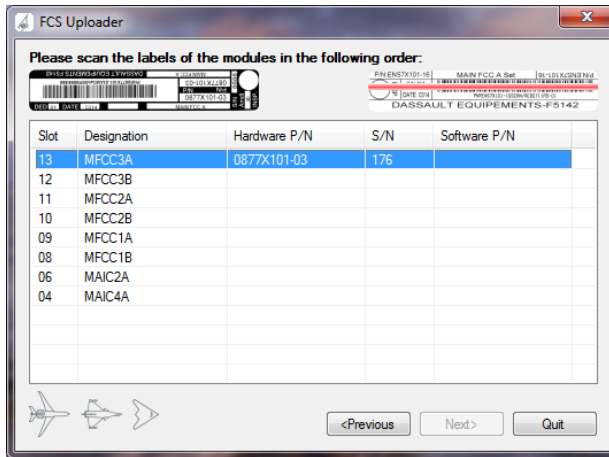
NOTE:NOTE: During the link setting up, a bell-ringing like "DING/DONG" can be heard from laptop.

- Click on "Next" when the "Next" button is enable

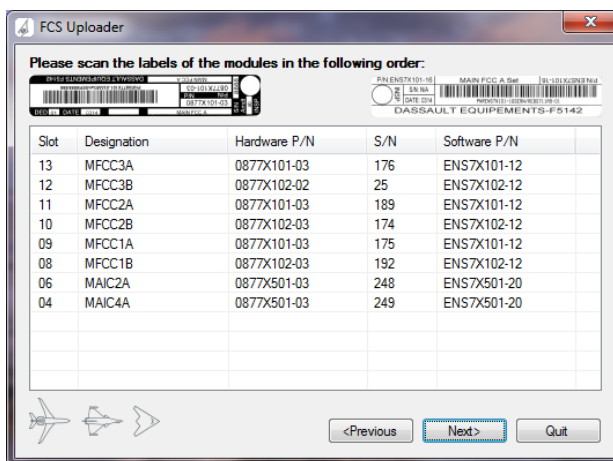


- **SCAN 1** : scan the modules MFCC3A (slot 13), MFCC3B (slot12), MFCC2A (slot 11), MFCC2B (slot 10), MFCC1A (slot 9), MFCC1B (slot 8), MAIC2A (slot 6), MAIC4A (slot 4) bar codes. To facilitate the scan, lift the left locking lever.





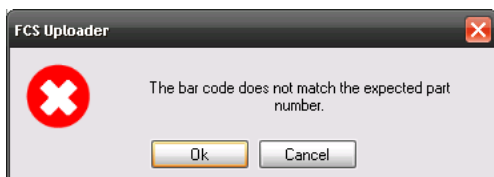
- "Next" command is available as soon as the eight modules are correctly recognized.



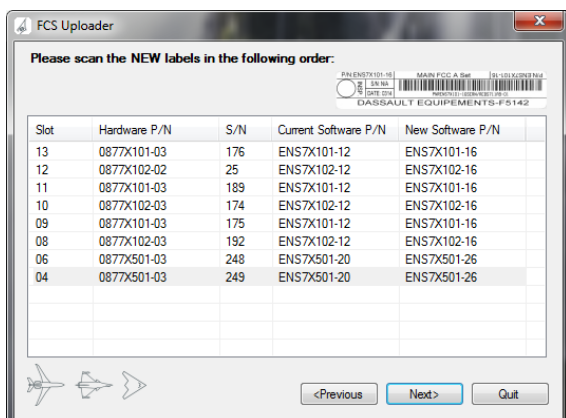
- Click on "Next". The screen below could be displayed during the CD ROM activity.



NOTE:NOTE: If the operator makes an error as wrong slot scanned, scanning order not respected, slot already scanned, wrong module P/N with respect of the scanned slot, FCS software update media not detected,..., following messages would be displayed.



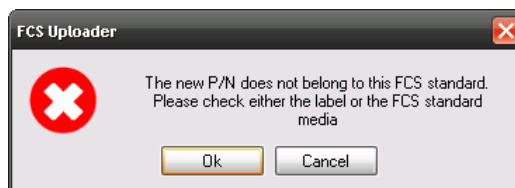
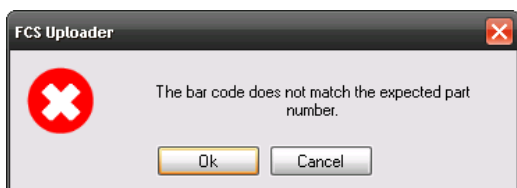
- In this case, click on OK and start again the operation starting from the module which caused the error message
- **SCAN 2**: Scan the labels MFCC3A, MFCC3B, MFCC2A, MFCC2B, MFCC1A, MFCC1B, MAIC2A, MAIC4A on the related FCS labels paperbook (DDM00102-xx)



- Click on "Next"

Column "NEW P/N" is automatically fed with scanned MFCC3A, MFCC3B, MFCC2A, MFCC2B, MFCC1A, MFCC1B, MAIC2A and MAIC4A label informations from the related FCS standard paperbook (DDM00102-xx).

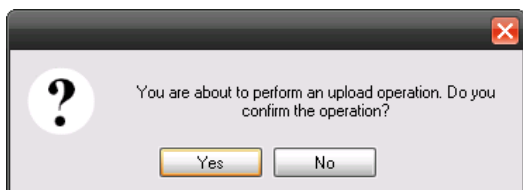
NOTE:NOTE: If the scanned P/N on the new label doesn't match with the one expected in the column "NEW P/N", the following message is displayed. In this case clic "OK" and start again the operation starting from the module which caused the error message.



Bar code reading is finished.

A message warns that an uploading operation is to begin.

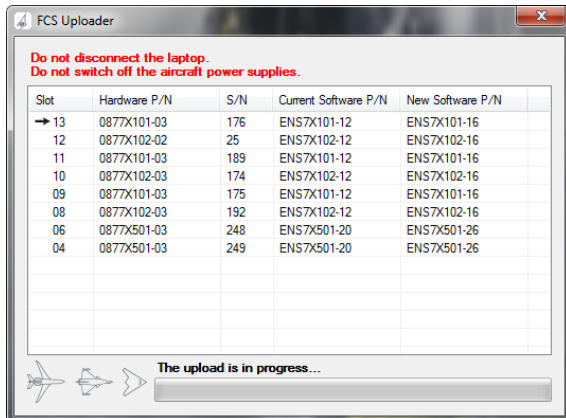
NOTE:NOTE: If you click on "NO", uploading is aborted and the application goes back to screen **SCAN 2**



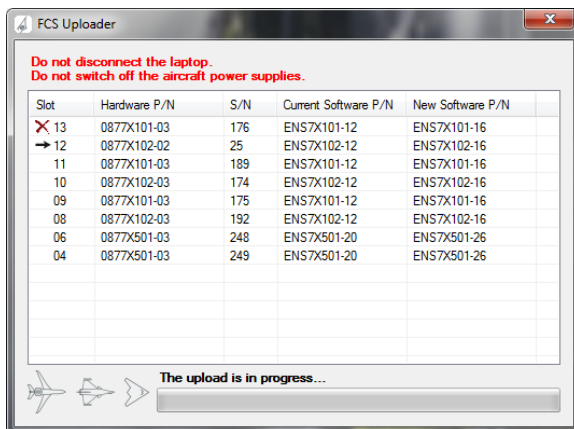
- Click on "YES"

Uploading begins and is announced by →. It is mandatory not to disconnect the laptop and not de-energize the aircraft during uploading. Uploading runs module after module and is stated by a bar graph located bottom of the uploading window. A correctly uploaded module is notched

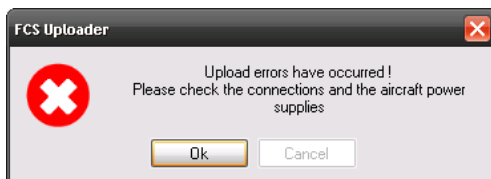


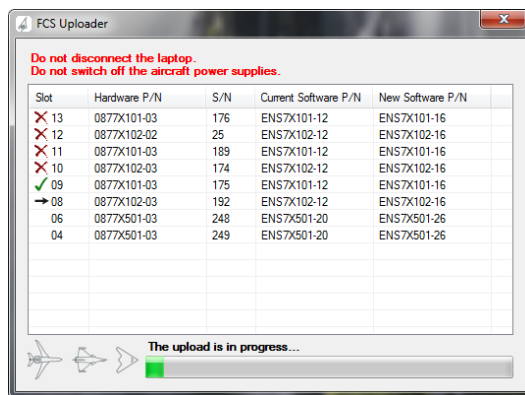


- A failed uploading sequence is notched . A warning message asks to check the connections and electrical powers but the next module uploading sequence goes on.



- When one or several slots are notched , click on "Retry" to re-start the related modules failed uploading sequences.

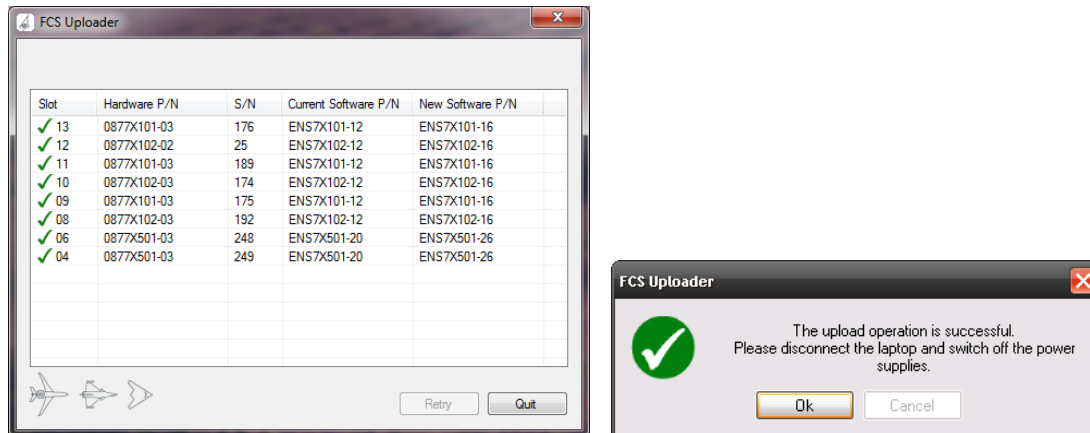




CAUTION: The operator can apply a "Retry". If the failure persists, close the application ("QUIT" button) and shut down the A/C, then perform the procedure again at the beginning (refer to section 4.1.1 "Initialization"). In that case log files will be erased. Please save first the "Module by Module" uploading reports available in the laptop directory: "My Documents \ Dassault-Aviation \ FCS Uploader \ Modules". In case of persistent failure, the related uploaded module is however new FCS standard upgraded but considered as faulty and must be replaced.

- The uploading procedure is successfully completed when the whole displayed slots are notched





- Click on "Quit", the application "FCS UPLOADER" closes

IMPORTANT :

- Inside the LH FRONT RACK, unstick the MFCC3A, MFCC3B, MFCC2A, MFCC2B, MFCC1A; MFCC1B, MAIC2A and MAIC4A modules labels scanned at step **SCAN1**. Then go to chapter 4.1.3.

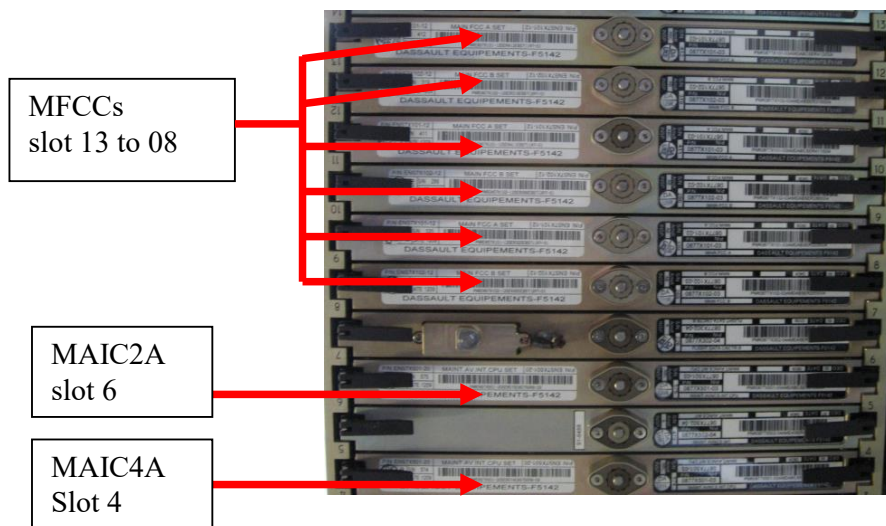
4.1.3 Sticking of labels

- Stick the new labels related FCS standard labels paperbook (DDM00102-xx) scanned at step **SCAN2** and pay attention to the slot and the P/N.
- With a permanent pen, write the S/N of the module on the new software label stucked.



- Stick pre-identified stamp on the label
- This operation will be carried out by the operator.

CAUTION: The modules whose operation of remote loading has failed must mandatory be identified by the new label of the uploaded standard. They will be considered broken down and the procedure of installation/remove modules will have being applied in this case (refer to 27-90-01-900-801).



4.1.4 Printing of report (fig 3)

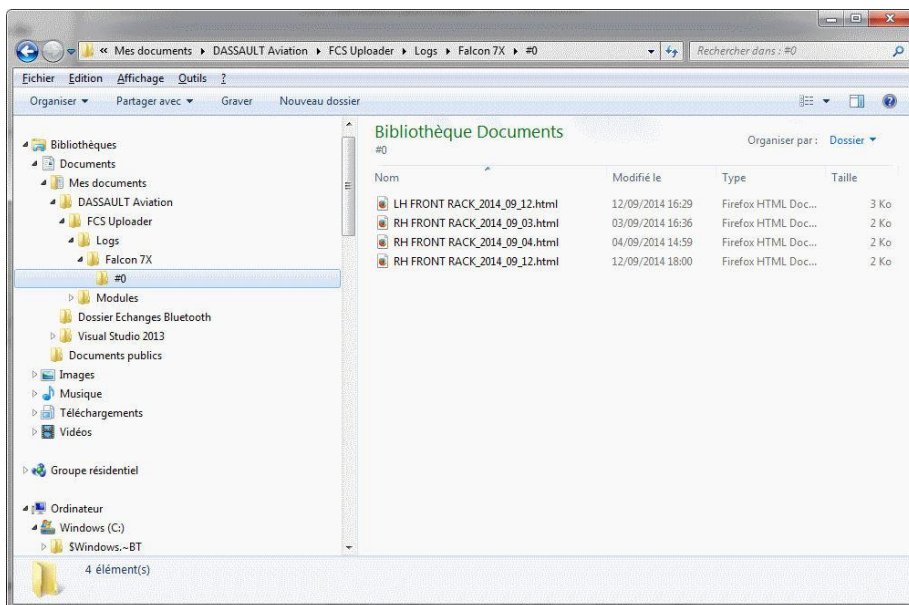
When the label sticking procedure is fulfilled, the operator has to print the uploading report created by the application "FCS UPLOADER".

This report contains:

- Informations given by the operator :
 - + Aircraft type.
 - + Aircraft Serial Number.
 - + Repair station.
 - + Operator.
 - + Rack.
- Information given by FCS software media :
 - + Upload standard.
- Informations given by the tool (MEM40501-xx) :
 - + Date.
 - + Tool name.
 - + Tool version.
 - + Module Part Number.
 - + Module Serial Number.
 - + Upload status.

Laptop directory: "My Documents\Dassault-Aviation\FCS Uploader\Logs\Falcon 7X\n°A/C.

(A/C serial number entered by the operator at the beginning of the procedure).



If more than one report is recorded in the directory, the last one in time shall be considered.
 This report is to be :

- Printed.
- Commented (if necessary).
- Signed and stamped by the operator.
- Scanned and sent to DSC Support by e-mail (address will be confirmed in the SB).

Moreover the operator shall send to DSC Support by e-mail (address will be confirmed in the SB) **ALL** the "Module by Module" uploading reports available in the Laptop directory:

"My Documents \ Dassault-Aviation \ FCS Uploader \ Modules".

Dossiers	Nom	Taille	Type	Date de modif...
Bureau	ENS7X501-18#8888 2010-01-05 12_06_45.log	3 Ko	Document texte	05/01/2010 12:06
Mes documents	ENS7X501-18#9999 2010-01-05 12_07_01.log	3 Ko	Document texte	05/01/2021 12:07
CD Designer	ENS7X501-18#8888 2010-01-05 12_09_13.log	3 Ko	Document texte	05/01/2010 12:09
DASSAULT Aviation	ENS7X501-18#9999 2010-01-05 12_09_35.log	3 Ko	Document texte	05/01/2010 12:09
FCS Uploader	ENS7X501-18#8888 2010-01-05 12_10_49.log	3 Ko	Document texte	05/01/2010 12:10
Logs	ENS7X501-18#9999 2010-01-05 12_10_49.log	3 Ko	Document texte	05/01/2010 12:10
Falcon 7X				
#1				
Modules				
2010-01-05				

NOTE:NOTE:If no RH FRONT rack module to upload or if RH FRONT modules are already uploaded, go to § 4.1.5 else go to § 4.2.

Fig 3

Uploading LH FRONT Rack report

FIELD UPLOAD RECORD				
Aircraft	Falcon 7X			
Serial number	0			
Uploaded standard	2.3.1			
Rack	LH FRONT RACK			
Date	2014-09-12			
Repair station	DASSAULT Aviation			
Operator	Jérôme CAPPELLE			
Tool	FCS Uploader (v2.0.0.1)			

Slot	Module P/N	S/N	New P/N	Upload status
13	0877X101-03	176	ENS7X101-16	PASSED
12	0877X102-02	25	ENS7X102-16	PASSED
11	0877X101-03	189	ENS7X101-16	PASSED
10	0877X102-03	174	ENS7X102-16	PASSED
09	0877X101-03	175	ENS7X101-16	PASSED
08	0877X102-03	192	ENS7X102-16	PASSED
06	0877XS01-03	248	ENS7XS01-26	PASSED
04	0877XS01-03	249	ENS7XS01-26	PASSED

Results of the aircraft tests specified in the Service Bulletin	
PASSED	FAILED

Signature
Stamp

4.1.5 Close-up LH FRONT Rack

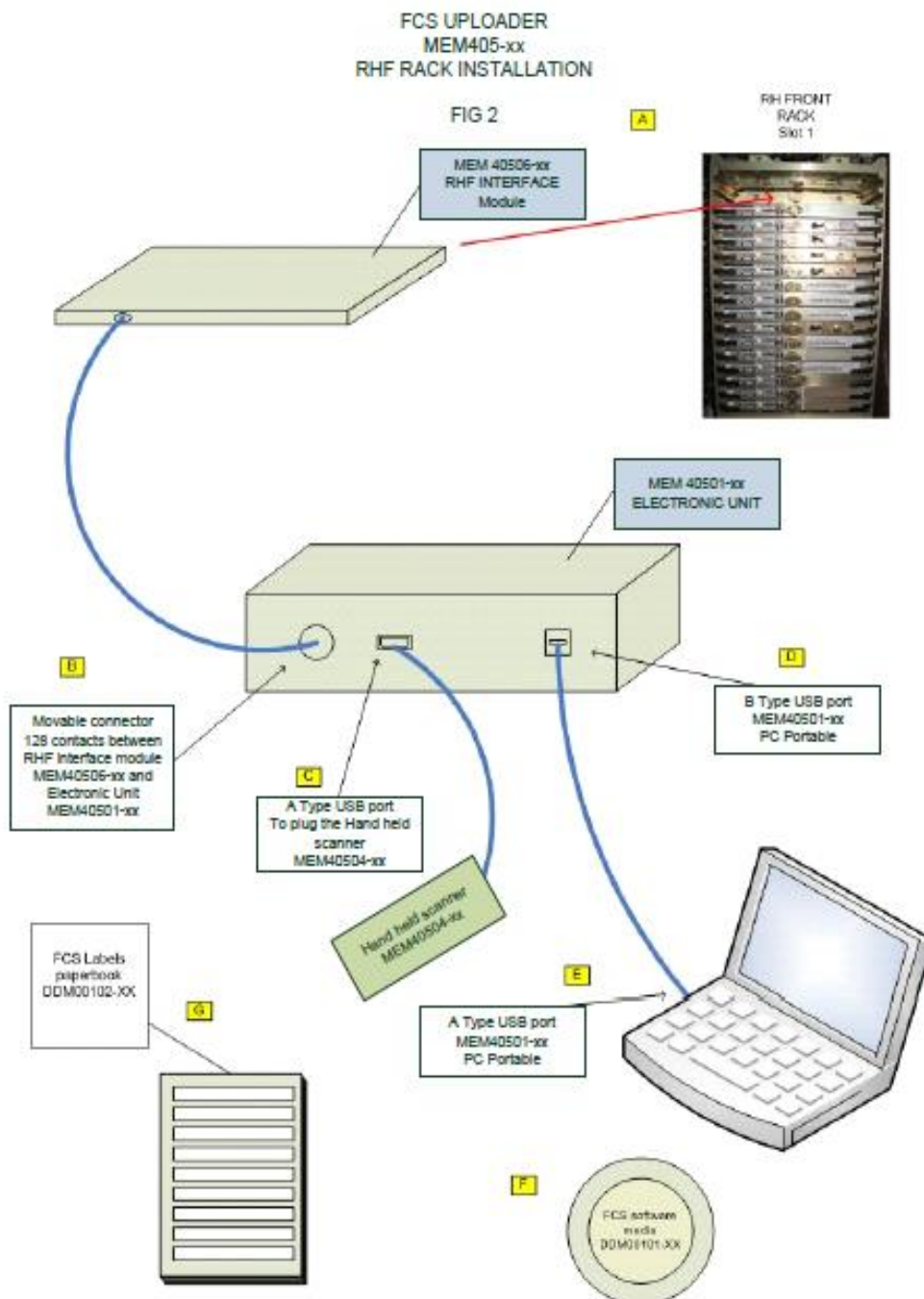
- On the maintenance panel (1010TP) set the TEST E1 switch (R511CZ) and TEST E2 switch (L511CZ) to the OFF position (DOWN position).
 - De-energize the aircraft (refer to 24-00-00-860-801).
 - Set out the laptop the FCS software media (DDM00101-xx) and keep it.
 - Switch off the laptop.
 - Disconnect the USB cable between the laptop and the Electronic Unit (MEM 40501-xx).
 - Disconnect the hand-held scanner (MEM 40504-xx) from Electronic Unit (MEM 40501-xx).
 - Disconnect the movable connector 128 contact between LHF interface module (MEM 40505-xx) and Electronic Unit (MEM 40501-xx).
 - Set out the LHF interface module (MEM 40505-xx) from slot 17 of LH FRONT rack.
 - To insert plug in slot 17 of LH FRONT rack with the extraction tool (MGB 660-xx). (fig 1A bis refer to page 11) proceed as follows :
 - Insert the flight plug with the extraction tool
 - Engage the flight plug by tightening the drive screw (4)
 - Pull the rods (3) to the stop position and remove the extraction tool
 - Check the condition of the claws of the rods (1) (no broken or damaged claws) also check if the fixing screws (2) are present on the bottom of the tool
- CAUTION : if a claw or a screw is missing check if the rack does not contain a F.O.D (Foreign Object Debris)
- Close the LH FRONT rack and install the linings (refer to 27-90-01-900-801 para 8).
 - Take care of the FCS standards labels paperbook as well as CD ROM.

Go to chapter 4.3.

4.2 Software RH FRONT Rack uploading

NOTE:NOTE: see hereafter the RHF Rack layout.

RHF				
<i>Power Supplies</i>				
E1 E3 E4				
ATA #	TOP	Slot #	P/N	CFI
27-02-0100	Spare	1	-	
27-02-0200	Spare	2	-	
27-02-0300	RHF_PWR4	3	00A051-xx	(302CZ)
27-02-0400	SFCI4	4	0877X601-xx	(402CZ)
27-02-0500	SFCI3	5	0877X601-xx	(502CZ)
27-02-0600	FDC1-A	6	0877X301-xx	(602CZ)
27-02-0700	FDC3-A	7	0877X301-xx	(702CZ)
27-02-0800	SFCC1	8	ENS7X201-xx	(802CZ)
27-02-0900	SFCC2	9	ENS7X201-xx	(902CZ)
27-02-1000	SFCC3	10	ENS7X201-xx	(1002CZ)
27-02-1100	FDC5-A	11	0877X301-xx	(1102CZ)
27-02-1200	MAIC3_A	12	ENS7X501-xx	(1202CZ)
27-02-1300	MAI_3	13	0877X502-xx	(1302CZ)
27-02-1400	MAIC1_A	14	ENS7X501-xx	(1402CZ)
27-02-1500	MAI_1	15	0877X502-xx	(1502CZ)
27-02-1600	RHF_PWR1	16	00A051-xx	(1602CZ)
27-02-1700	RHF_PWR3	17	00A051-xx	(1702CZ)
BOTTOM				



4.2.1 Initialization (fig 2)

- No electrical energy (refer to 24-00-00-860-801).
- Get the labels paperbook (DDM00102-xx) (fig 1-G) with the related modules identification labels.
- Connect the "uploading" laptop PC to the local means (electrical connection 110V/220V AC) if its own battery is not charged enough to ensure full time uploading (roughly 1H20mn).

NOTE:NOTE: Interruption during uploading will cause depot level return for the related modules.

- Remove the linings 222XZ - 222YZ (refer to 25-13-13-900-801).
- Open the RHF Rack (refer to 27-90-01-900-803 para 3).
- Start the uploading laptop PC (be sure that screen and hard drive stand-by mode are disabled) and insert the FCS software media (DDM00101-xx) (fig 2-F).
- Extract the plug from slot 1 with the extraction tool (MGB 660-xx). Refer to Fig 1A bis page 11
 - Before to insert the tool, check the condition of the claws of the rods (1) (no broken or damaged claws) also check if the fixing screws (2) are present on the bottom of the tool
 - NOTE : if the tool do not comply with these conditions of use, then another tool must be used.
 - Pull the rods (3) to the stop position
 - Insert the tool into slot 1 and push the rods (3) to the stop position
 - Extract the flight plug by loosening the drive screw (4)
- Insert and screw in slot 1 the RHF module interface (MEM 40506-xx) (fig 2-A).
- Plug the 128 contact movable connector from the RHF module interface (MEM 40506-xx) on the fixed 128 contact connector of the Electronic Unit (MEM 40501-xx) (fig 2-B).
- Plug the hand-held scanner (MEM 40504-xx) on the A type USB port of the Electronic Unit (MEM 40501-xx) (fig 2-C).
- Connect the cable between B type USB port plug of Electronic Unit (MEM 40501-xx) to the A type USB port plug of uploading laptop PC (fig 2-D / fig 2-E).
- Remove F1 fuse (R9500CZ) out of PMAC 1 (R107CZ) and remove F1 fuse (L9500CZ) out of PMAC 2 (L107CZ) (refer to 24-34-13-960-801 para 4).

NOTE:NOTE: F1 fuse = CB1 on PMAC 1 and PMAC 2 for F8X

- Open B4 breaker (FBW RR E4 - **614CZ**) on the RH Rear SPDB (**R2000PM**) (refer to **24-00-00-860-807**).
- Open H5 breaker (FBW RF E4 - **214CZ**) on the RH Front SPDB (**R1000PM**) (refer to **24-00-00-860-807**).
- Open H3 breaker (FBW RF E3 - **613CZ**) on the LH Front SPDB (**L1000PM**) (refer to **24-00-00-860-807**).
- Energize the aircraft (refer to **24-00-00-860-801**).
- On the MDU "ELEC" functional diagram located inside the FCS C/B status page, set **OUT** the 1S01 SSPC (FBW LR E3 - **413CZ**) (refer to **24-00-00-860-806**).
- De-energize the aircraft (refer to **24-00-00-860-801**).
- On the maintenance panel (**1010TP**), set the TEST E1 switch (**R511CZ**) and TEST E2 switch (**L511CZ**) to the OFF position (DOWN).

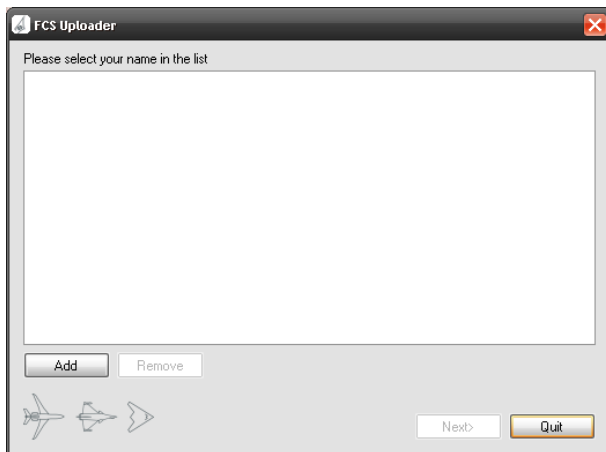
CAUTION: Please carefully respect the procedure here. If SELMON are still powered they will send a reboot order to the SFCC during the upload, resulting in SFCC failure.



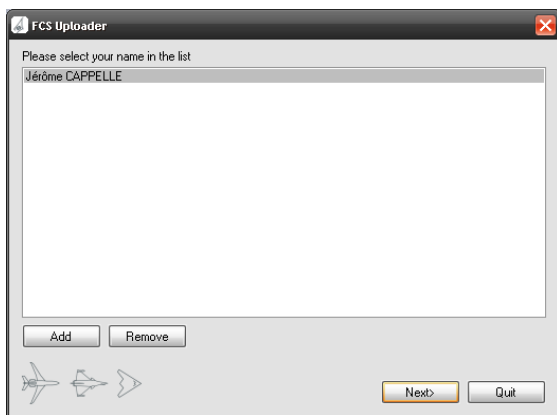
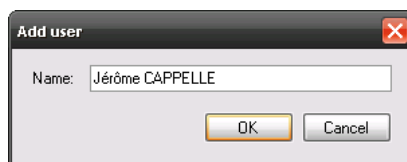
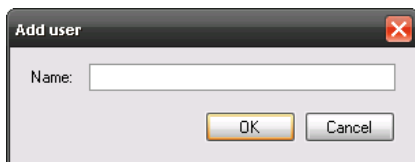
- Start the "FCS UPLOADER" application on the laptop (icon on the desktop).
A dedicated welcome screen reminds the operator to check the different required connections to upload. A message drawing attention on the laptop running on its own battery can be displayed
NOTE:NOTE: the aircraft is de-energized.



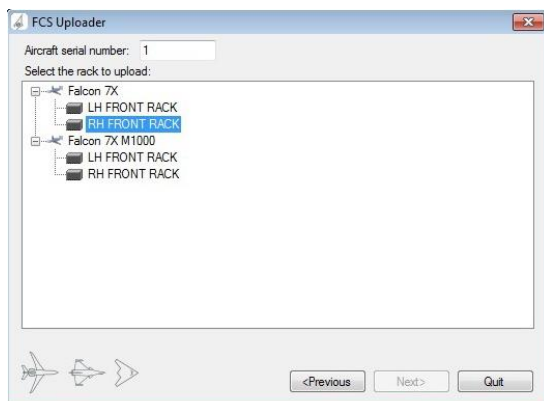
- Click on "Next"



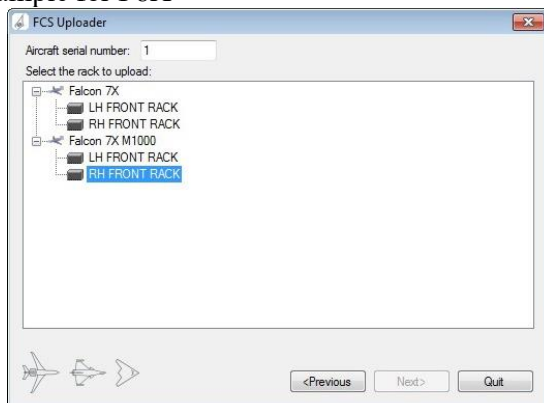
- Click on "Add" and enter the uploading operator's name.



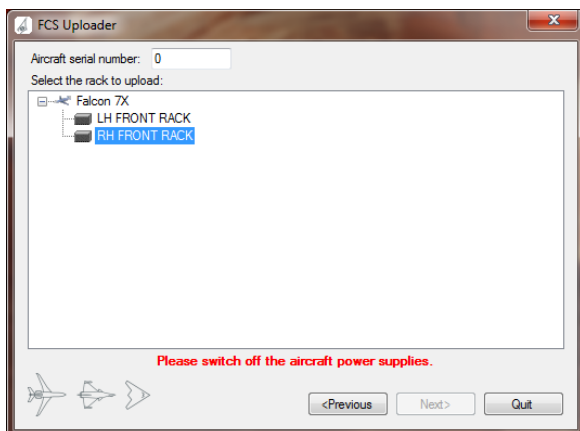
- Select your name in the list.
- Click on "Next".
- Enter the aircraft serial number.
- Select the RH FRONT RACK Falcon 7X or Falcon 7X M1000 (for F8X upload).



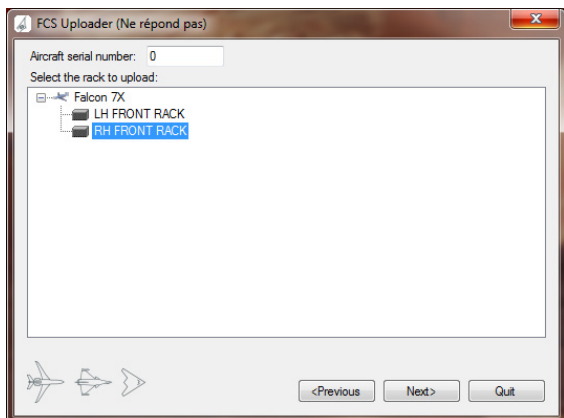
Example for F8X



- If the aircraft power supplies are still "ON", this red message occurs.



NOTE:NOTE: This screen stays in this state until the application detects automatically power supplies switched off; then the following screen appears.



NOTE:NOTE: If aircraft is already not powered, only disconnect then reconnect the laptop USB cable.

- Click on "Next"

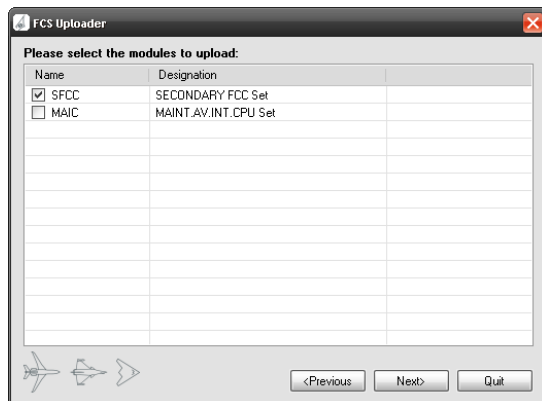
4.2.2 Uploading

Depending of the upload requested for the new standard as detailed in the SB, the operator could have to upload:

- SFCC and MAIC, go to chapter 4.2.2.3.
- SFCC only, go to chapter 4.2.2.1.
- MAIC only, go to chapter 4.2.2.2.

4.2.2.1 Uploading SFCC 1 - SFCC 2 - SFCC 3 modules

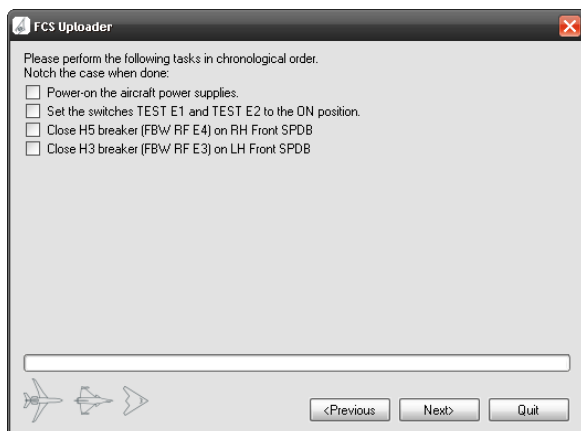
- Notch the case SFCC



- Click on "Next"
- Perform the following steps in chronological order :
 - ✚ Energize the aircraft (refer to 24-00-00-860-801).
 - ✚ On the maintenance panel (1010TP) set the TEST E1 switch (R511CZ) and TEST E2 switch (L511CZ) to the ON position (UP position).

NOTE: wait 10 seconds between each interlocking of the power supplies E4-E3-E2-E1 and respect this sequence.

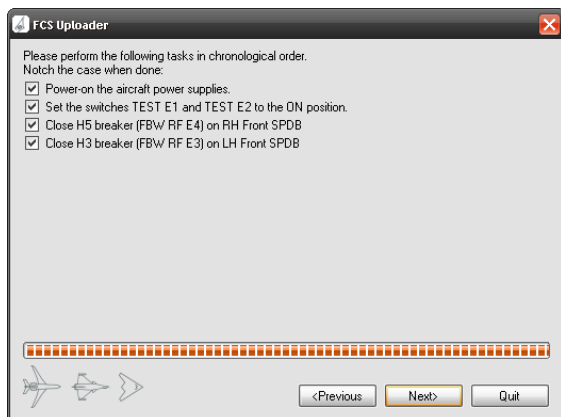
- ✚ Close H5 breaker (FBW RF E4 - 214CZ) on the RH Front SPDB (R1000PM) (refer to 24-00-00-860-807).
- ✚ Close H3 breaker (FBW RF E3 - 613CZ) on the LH Front SPDB (L1000PM) (refer to 24-00-00-860-807).
- ✚ Set the TEST E1 switch (R511CZ) to the OFF position, and then back to ON position 10 seconds after (no case to notch for this action)



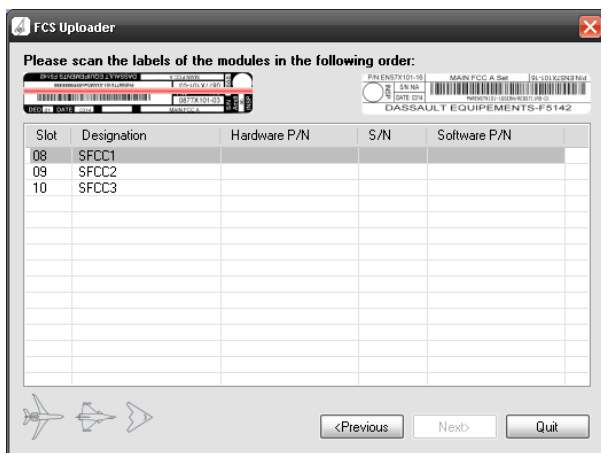
- Notch the case when done

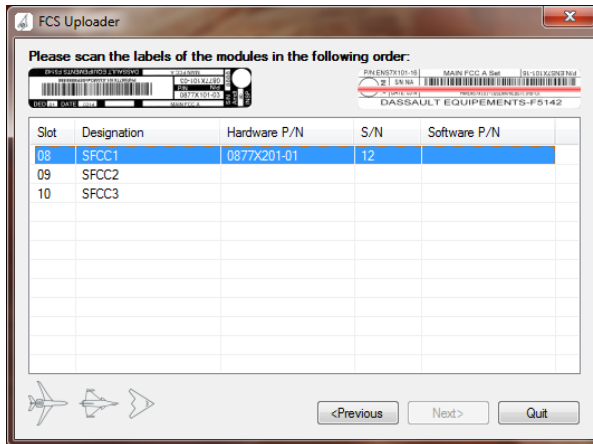
- After electrical power supplies detection, the link between RH FRONT RACK and Electronic Unit (**MEM40501-xx**) is automatically done.

NOTE:NOTE: During the link setting up, a bell-ringing like "DING/DONG" can be heard from laptop.

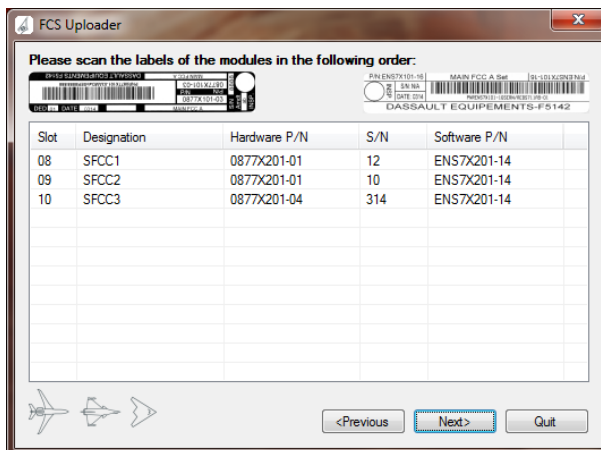


- Click on "Next" when the "Next" button is enable.
- **SCAN 1** :scan the modules SFCC1 (slot 8), SFCC2 (slot 9) and SFCC3 (slot 10). To facilitate the scan, lift the right locking lever.

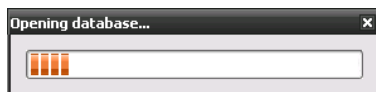




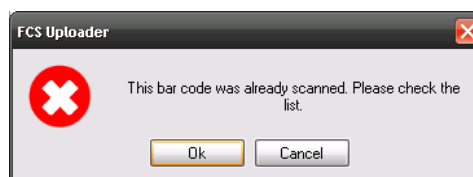
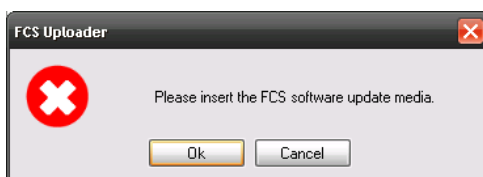
- "Next" command is available as soon as the three modules are correctly recognized.



- Click on "Next". The screen below could be displayed during the CD ROM activity.

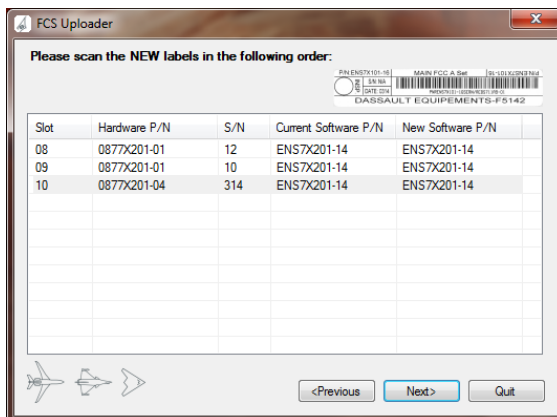
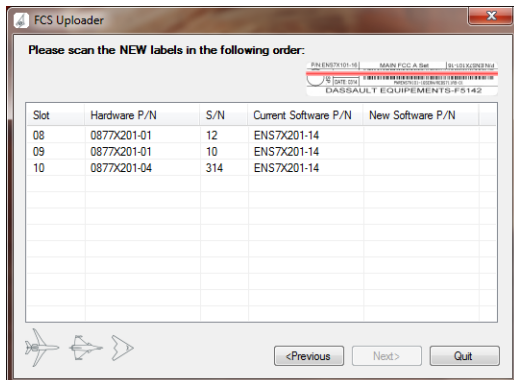


NOTE:NOTE: if the operator makes an error as wrong slot scanned, scanning order not respected, slot already scanned, wrong module P/N with respect of the scanned slot, FCS software update media not detected,..., following messages would be displayed





- In this case, click on OK and start again the operation starting from the module which caused the error message.
- **SCAN 2**: scan the labels SFCC1, SFCC2 and SFCC3 on the related FCS labels paperbook (DDM00102-xx).



- Click on "Next"

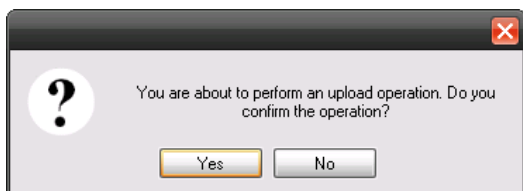
Column "NEW P/N" is automatically fed with scanned SFCC1, SFCC2 and SFCC3 label informations from related FCS standard labels paperbook.

NOTE:NOTE: If the scanned P/N on the new label doesn't match with the one expected in the column "NEW P/N", the following message is displayed. In this case clic "OK" and start again the operation starting from the module which caused the error message.

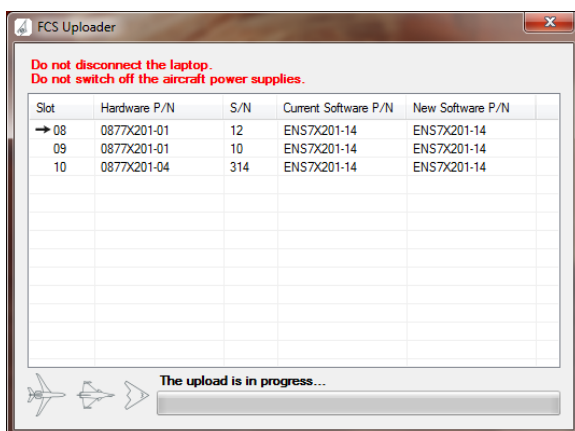


Bar code reading is finished.
 A message warns that an uploading operation is to begin.

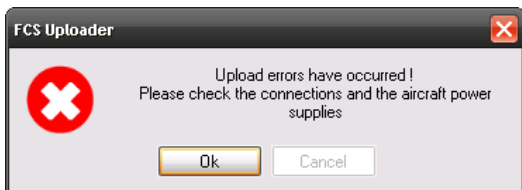
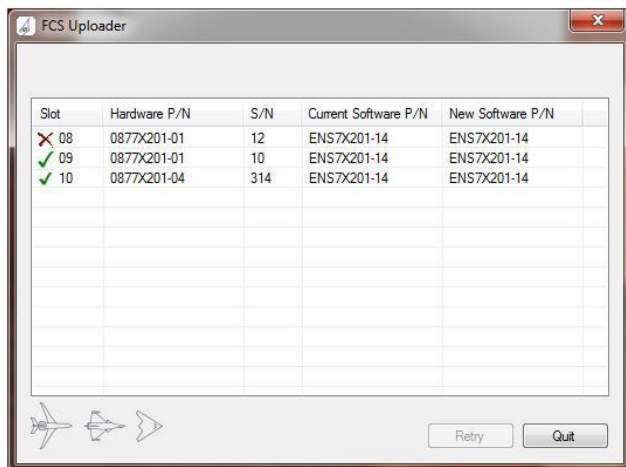
NOTE: if you click on "NO", uploading is aborted and the application goes back to screen **SCAN 2**



Uploading begins and is announced by → . It is mandatory not to disconnect the laptop and not de-energize the aircraft during uploading. Uploading runs module after module and is stated by a bar graph located bottom of the uploading window. A correctly uploaded module is notched



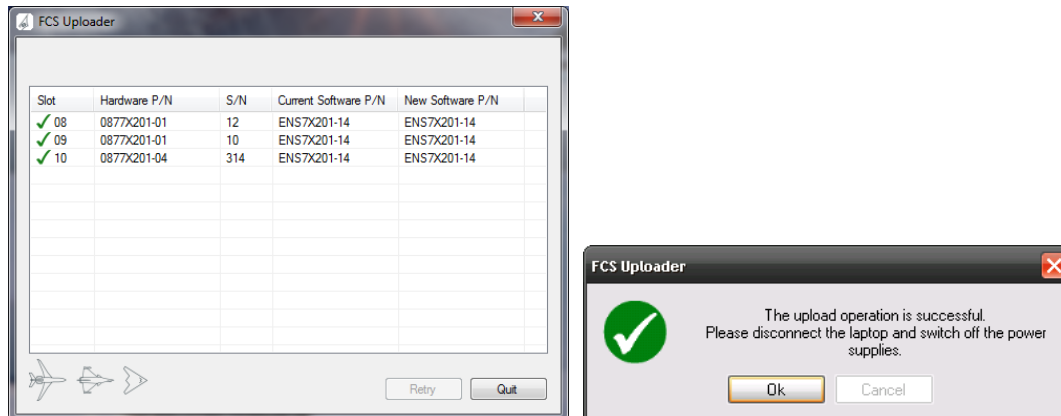
- A failed uploading sequence is notched . A warning message asks to check the connections and electrical powers but the next module uploading sequence goes on.



- When one or several slots are notched  reset power E1 by using E1 test switch on maintenance panel, wait 30 seconds and click on "Retry" to re-start the related modules failed uploading sequences.

CAUTION: The operator can apply a "Retry". If the failure persists, close the application ("QUIT" button) and shut down the A/C, then perform the procedure again at the beginning (refer to section 4.2.1 "Initialization"). In that case log files will be erased. Please save first the "Module by Module" uploading reports available in the laptop directory: "My Documents \ Dassault-Aviation \ FCS Uploader \ Modules". In case of persistent failure, the related uploaded module is however new FCS standard upgraded but considered as faulty and must be replaced.

- The uploading procedure is successfully completed when the whole displayed slots are notched 



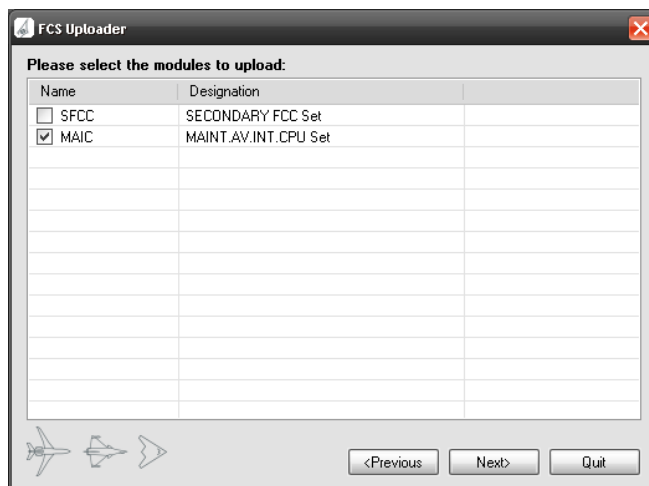
- Click on "Quit", the application "FCS UPLOADER" closes.

IMPORTANT :

- Inside the RH FRONT RACK slot 8, 9 and 10, unstick the SFCC1, SFCC2 and SFCC3 modules labels scanned at step **SCAN1**. Then go to chapter 4.2.3.

4.2.2.2 Uploading MAIC 1A - MAIC 3A modules

- Notch the case MAIC

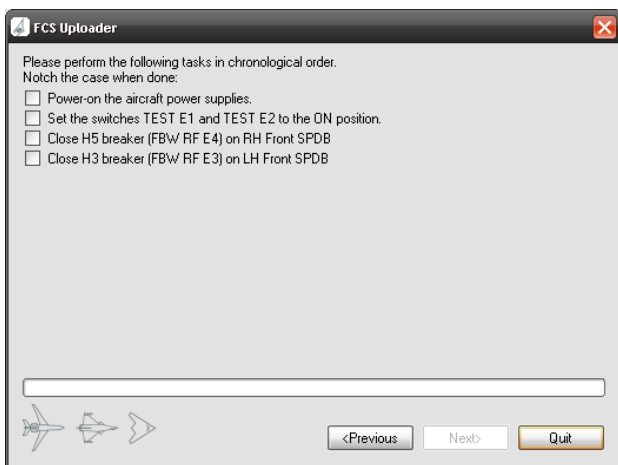


- Click on "Next"
- Perform the following steps in chronological order .

- ✚ Energize the aircraft (refer to 24-00-00-860-801).
- ✚ On the maintenance panel (1010TP) set the TEST E1 switch (R511CZ) and TEST E2 switch(L511CZ) to the ON position (UP position).

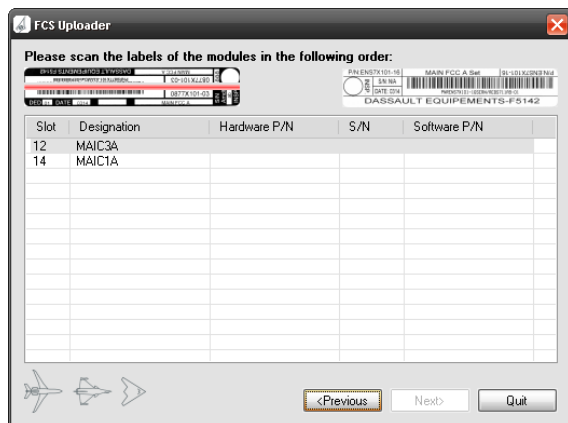
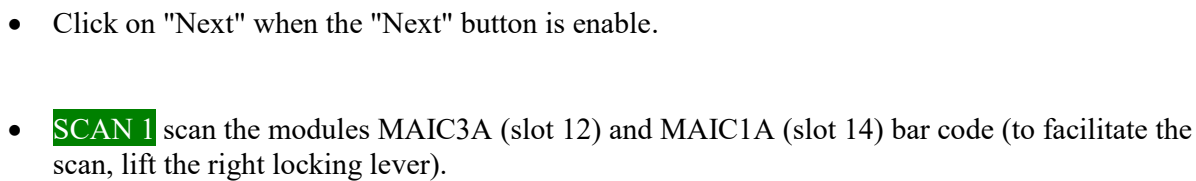
NOTE: wait 10 seconds between each interlocking of the power supplies E4-E3-E2-E1 and respect this sequence.

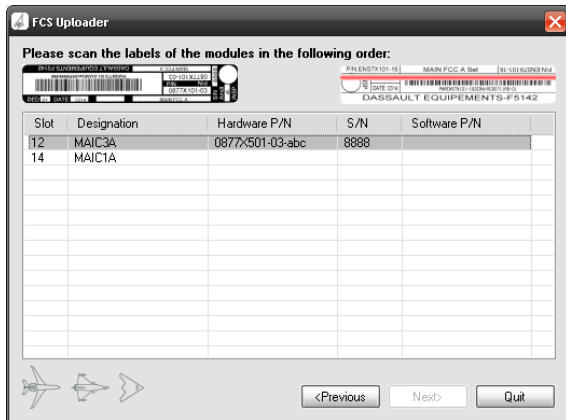
- ✚ Close H5 breaker (FBW RF E4 - 214CZ) on the RH Front SPDB (R1000PM) (refer to 24-00-00-860-807).
- ✚ Close H3 breaker (FBW RF E3 - 613CZ) on the LH Front SPDB (L1000PM) (refer to 24-00-00-860-807).
- ✚ Set the TEST E1 switch (R511CZ) to the OFF position, and then back to ON position 10 seconds after (no case to notch for this action)



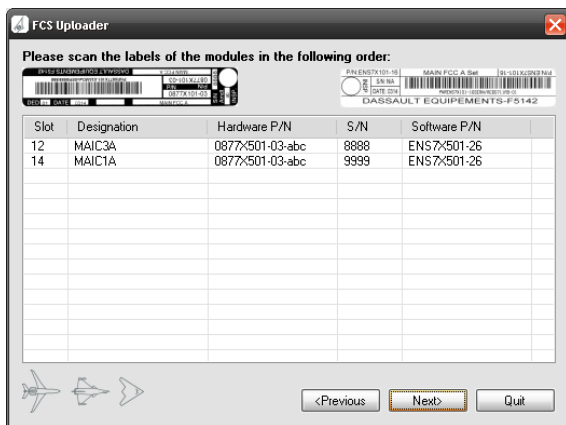
- Notch the case when done
- After electrical power supplies detection, the link between RH FRONT RACK and Electronic Unit (MEM40501-xx) is automatically done.

NOTE:NOTE: During the link setting up, a bell-ringing like "DING/DONG" can be heard from laptop.





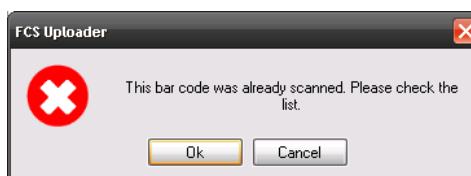
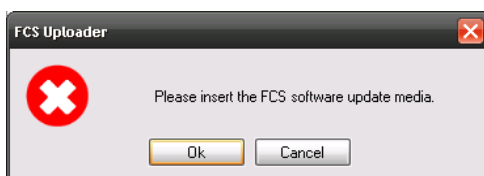
- "Next" command is available as soon as the two modules are correctly recognized.



- Click on "Next". The screen below could be displayed during the CD ROM activity.

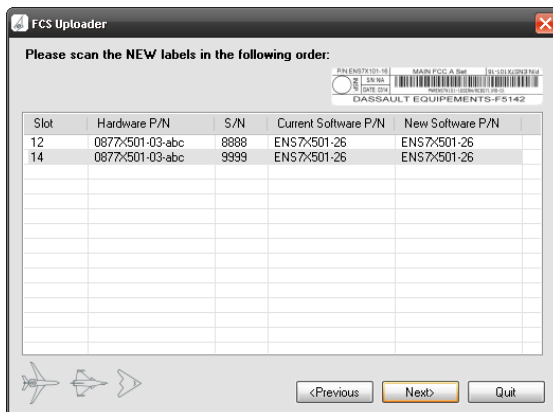
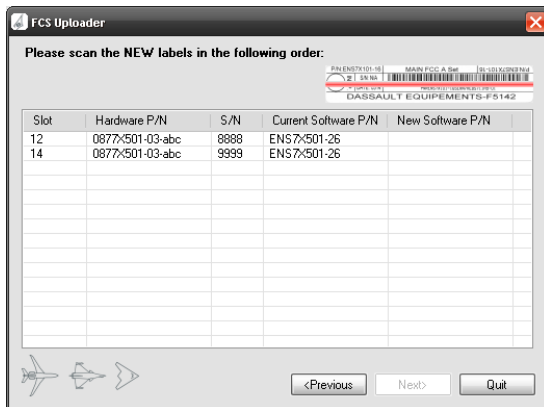


NOTE:NOTE: If the operator makes an error as wrong slot scanned, scanning order not respected, slot already scanned, wrong module P/N with respect of the scanned slot, FCS software update media not detected,..., following messages would be displayed.





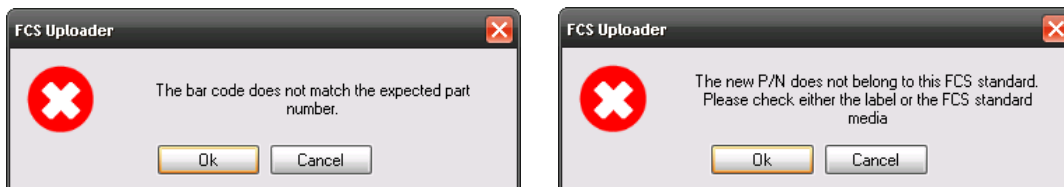
- In this case, click on OK and start again the operation starting from the module which caused the error message.
- **SCAN 2**: Scan the labels MAIC3A and MAIC1A on the related FCS labels paperbook (DDM00102-xx).



- Click on "Next".

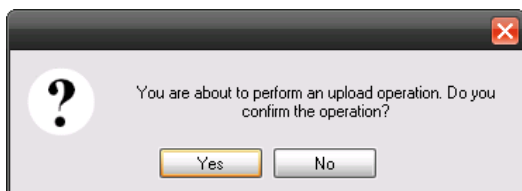
Column "NEW P/N" is automatically fed with scanned MAIC3A and MAIC1A label informations from related FCS standard labels paperbook.

NOTE:NOTE: If the scanned P/N on the new label doesn't match with the one expected in the column "NEW P/N", the following message is displayed. In this case clic "OK" and start again the operation starting from the module which caused the error message.



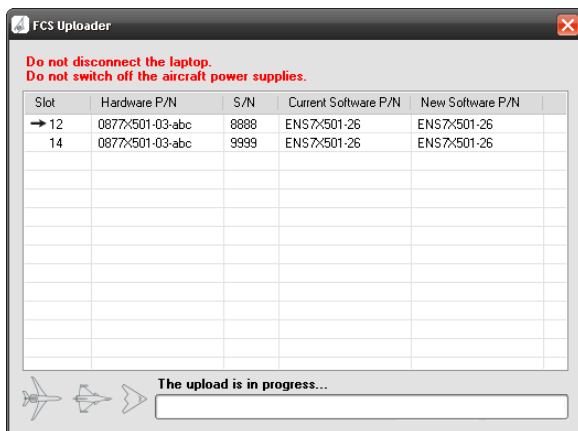
Bar code reading is finished.
A message warns that an uploading operation is to begin.

NOTE: If you click on "NO", uploading is aborted and the application goes back to screen **SCAN 2**

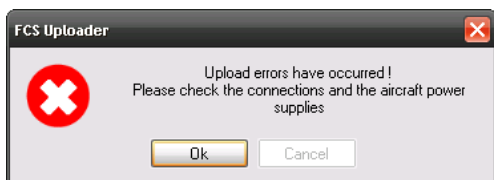
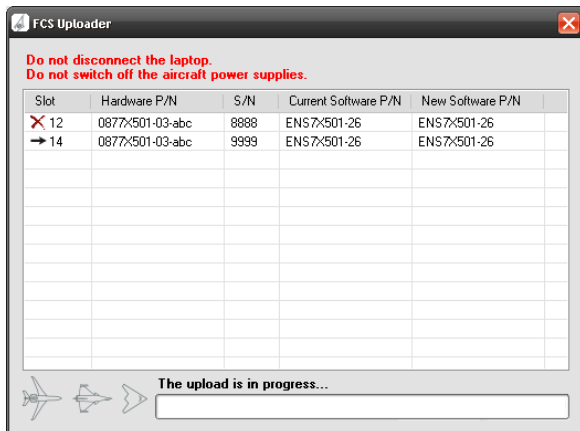


- Click on "YES"

Uploading begins and is announced by . It is mandatory not to disconnect the laptop and not de-energize the aircraft during uploading. Uploading runs module after module and is stated by a bar_graph located bottom of the uploading window. A correctly uploaded module is notched .

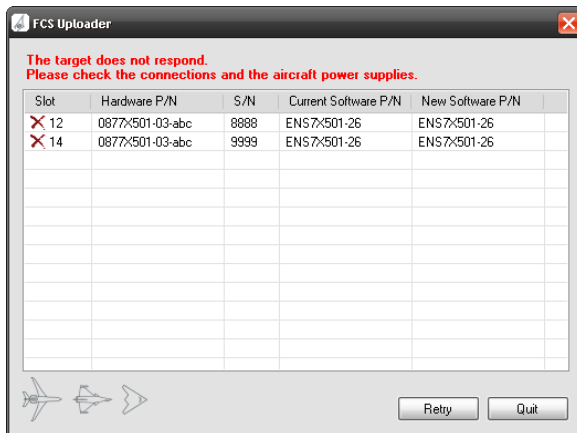


- A failed uploading sequence is notched . A warning message asks to check the connections and electrical powers but the next module uploading sequence goes on.

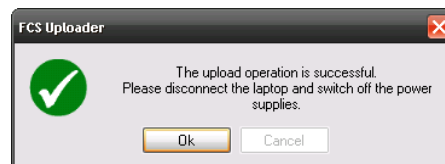
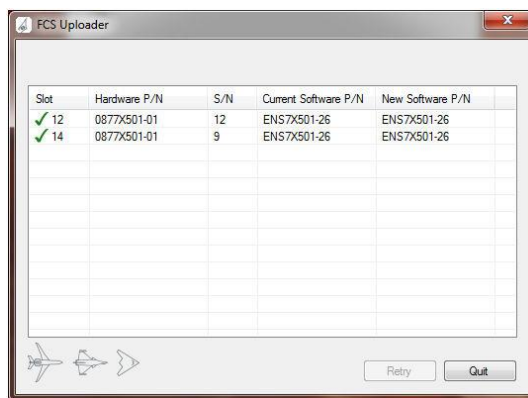


- When one or several slots are notched  click on "Retry" to re-start the related modules failed uploading sequences.

CAUTION: The operator can apply a "Retry". If the failure persists, close the application ("QUIT" button) and shut down the A/C, then perform the procedure again at the beginning (refer to section 4.2.1 "Initialization"). In that case log files will be erased. Please save first the "Module by Module" uploading reports available in the laptop directory: "My Documents \ Dassault-Aviation \ FCS Uploader \ Modules". In case of persistent failure, the related uploaded module is however new FCS standard upgraded but considered as faulty and must be replaced.



- The uploading procedure is successfully completed when the whole displayed slots are notched



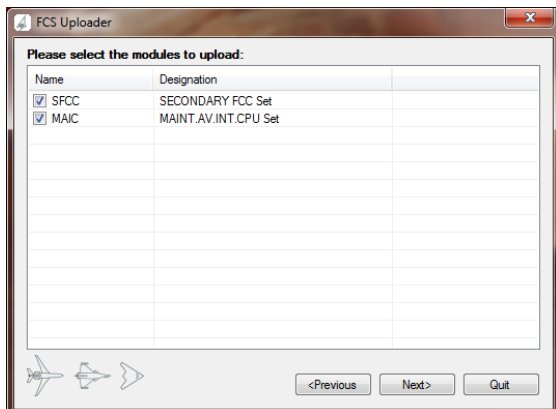
- Click on "Quit", the application "FCS UPLOADER" closes.

IMPORTANT :

- Inside the RH FRONT RACK slot 12 and slot 14, unstick the MAIC3A and MAIC1A modules labels scanned at step **SCAN1**
- Then go to chapter 4.2.3.

4.2.2.3 Uploading SFCC 1 - SFCC 2 - SFCC 3 - MAIC 1A - MAIC 3A modules

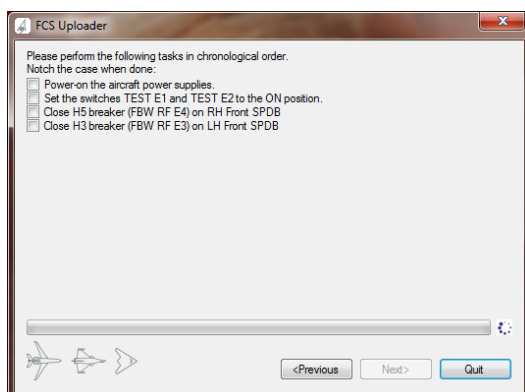
- Notch the cases SFCC et MAIC



- Click on "Next"
- Perform the following steps in chronological order :
 - ✚ Energize the aircraft (refer to 24-00-00-860-801).
 - ✚ On the maintenance panel (1010TP) set the TEST E1 switch (R511CZ) and TEST E2 switch (L511CZ) to the ON position (UP position).

NOTE: wait 10 seconds between each interlocking of the power supplies E4-E3-E2-E1 and respect this sequence.

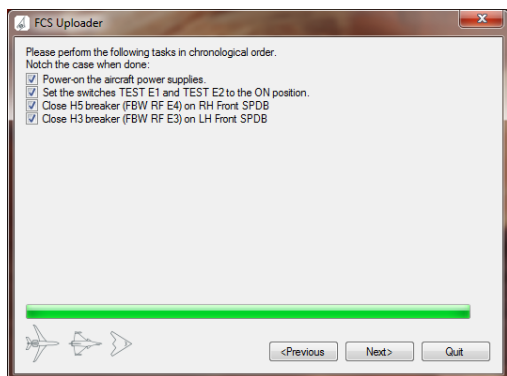
- ✚ Close H5 breaker (FBW RF E4 - 214CZ) on the RH Front SPDB (R1000PM) (refer to 24-00-00-860-807).
- ✚ Close H3 breaker (FBW RF E3 - 613CZ) on the LH Front SPDB (L1000PM) (refer to 24-00-00-860-807).
- ✚ Set the TEST E1 switch (R511CZ) to the OFF position, and then back to ON position 10 seconds after (no case to notch for this action)



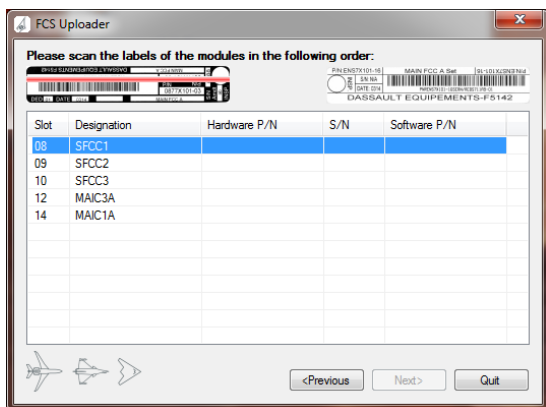
- Notch the case when done

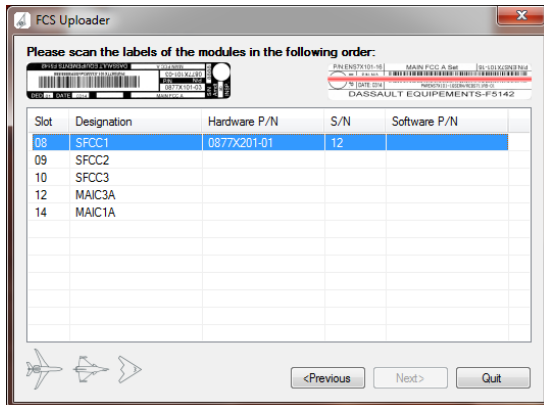
- After electrical power supplies detection, the link between RH FRONT RACK and Electronic Unit (**MEM40501-xx**) is automatically done.

NOTE: During the link setting up, a bell-ringing like "DING/DONG" can be heard from the laptop.

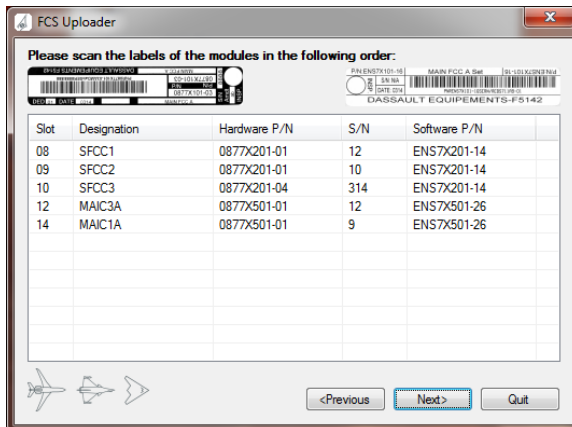


- Click on "Next" when the "Next" button is enable.
- SCAN 1**: scan the modules SFCC1 (slot 8), SFCC2 (slot 9), SFCC3 (slot 10), MAIC3A (slot 12) and MAIC1A (slot 14) bar codes (to facilitate the scan, lift the right locking lever).





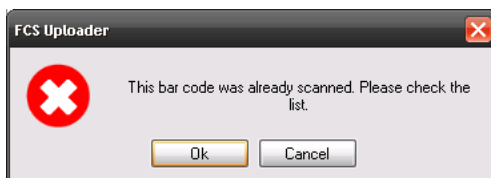
- "Next" command is available as soon as the five modules are correctly recognized.

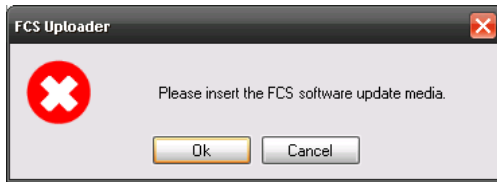


- Click on "Next". The screen below could be displayed during the CD ROM activity.

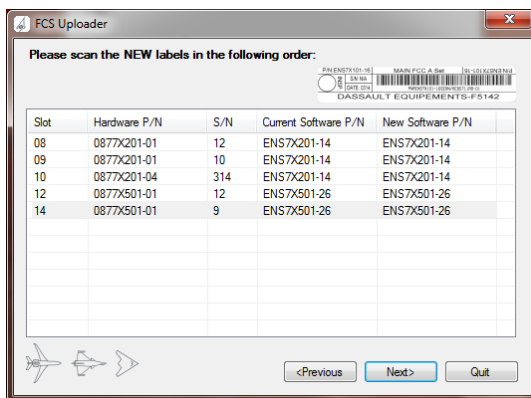
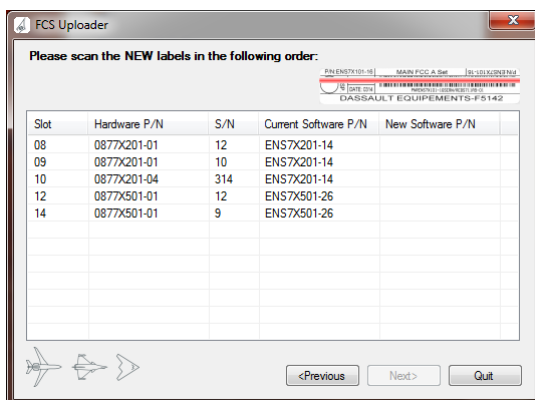


NOTE: If the operator makes an error as wrong slot scanned, scanning order not respected, slot already scanned, wrong module P/N with respect of the scanned slot, FCS software update media not detected,..., following messages would be displayed.





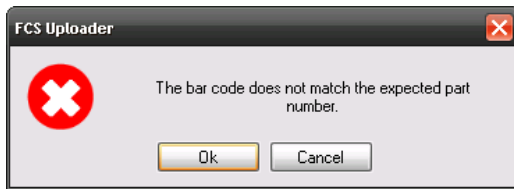
- In this case, click on OK and start again the operation starting from the module which caused the error message.
- **SCAN 2**: Scan the labels SFCC1, SFCC2, SFCC3, MAIC3A, and MAIC1A on the related FCS labels paperbook (DDM00102-xx).



- Click on "Next"

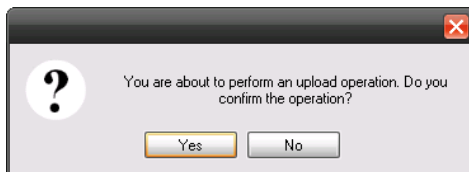
Column "NEW P/N" is automatically fed with scanned SFCC1, SFCC2, SFCC3, MAIC3A, MAIC1A label information from the related FCS standard labels paperbook.

NOTE: If the scanned P/N on the new label doesn't match with the one expected in the column "NEW P/N", the following message is displayed. In this case clic "OK" and start again the operation starting from the module which caused the error message.

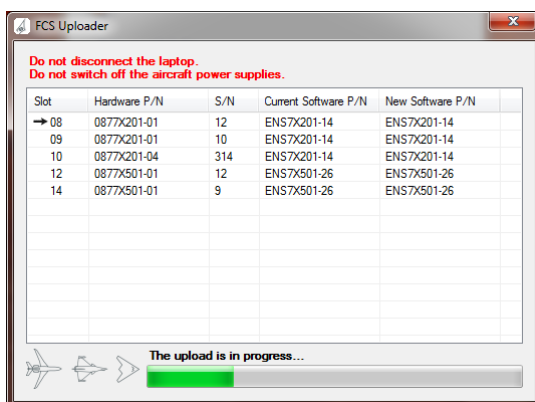


Bar code reading is finished.
 A message warns that an uploading operation is to begin.

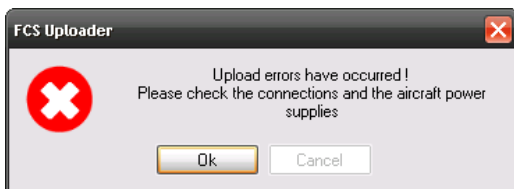
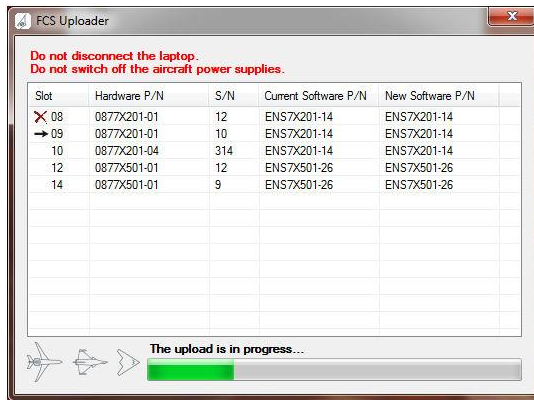
NOTE: If you click on "NO", uploading is aborted and the application goes back to screen
SCAN 2



- Click on "YES"
- Uploading begins and is announced by →. It is mandatory not to disconnect the laptop and not de-energize the aircraft during uploading. Uploading runs module after module and is stated by a bar graph located bottom of the uploading window. A correctly uploaded module is notched ✓



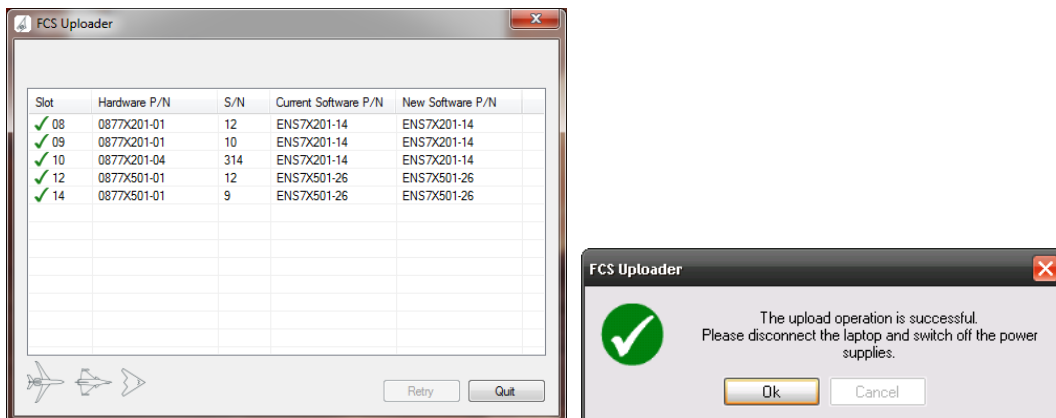
- A failed uploading sequence is notched . A warning message asks to check the connections and electrical powers but the next module uploading sequence goes on.



- When one or several slots are notched  reset power E1 by using E1 test switch on maintenance panel, wait 30 seconds and click on "Retry" to re-start the related modules failed uploading sequences.

CAUTION: The operator can apply a "Retry". If the failure persists, close the application ("QUIT" button) and shut down the A/C, then perform the procedure again at the beginning (refer to section 4.2.1 "Initialization"). In that case log files will be erased. Please save first the "Module by Module" uploading reports available in the laptop directory: "My Documents \ Dassault-Aviation \ FCS Uploader \ Modules". In case of persistent failure, the related uploaded module is however new FCS standard upgraded but considered as faulty and must be replaced.

- The uploading procedure is successfully completed when the whole displayed slots are notched 



- Click on "Quit", the application "FCS UPLOADER" closes.

IMPORTANT :

- Inside the RH FRONT RACK, unstick the SFCC1 (slot 8) - SFCC2 (slot 9) - SFCC3 (slot 10) - MAIC3A (slot 12) - MAIC1A (slot 14) modules labels scanned at step **SCAN1**. Then go to 4.2.3.

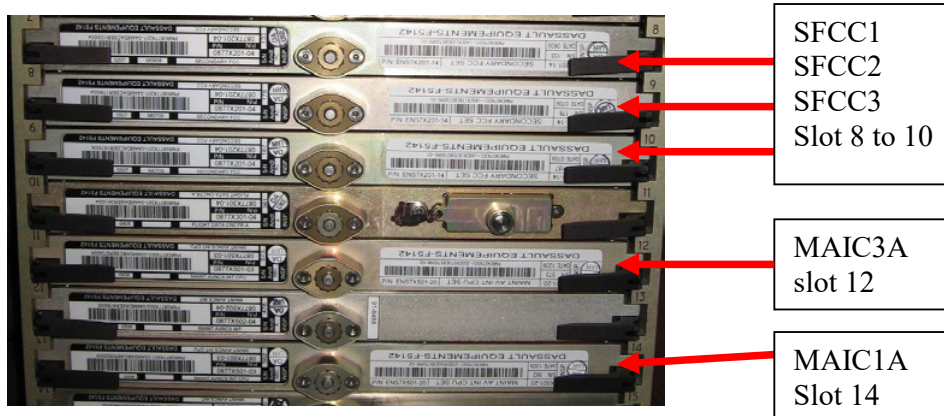
4.2.3 Sticking of labels

- Stick the new labels related FCS standard labels paperbook (**DDM00102-xx**) scanned at step **SCAN2** and pay attention to the slot and the P/N.
- With a permanent pen, write the S/N of the module on the new software label stucked.



- Stick pre-identified stamp on the label.
- This operation will be carried out by the operator.

CAUTION: The modules whose operation of remote loading failed must mandatory be identified by the new label of the downloaded standard. They will be considered broken down and the procedure of installation/remove modules will have being applied in this case (refer to 27-90-01-900-803).



4.2.4 Printing of report (fig 4)

When the label sticking procedure is fulfilled, the operator has to print the uploading report created by the application "FCS UPLOADER".

This report contains :

- Informations given by the operator :
 - ✚ Aircraft type.
 - ✚ Aircraft Serial Number.
 - ✚ Repair station.
 - ✚ Operator.
 - ✚ Rack.
- Information given by FCS software media :
 - ✚ Upload standard.
- Informations given by the tool (MEM40501-xx) :
 - ✚ Date.
 - ✚ Tool name.
 - ✚ Tool version.
 - ✚ Module Part Number.
 - ✚ Module Serial Number.
 - ✚ Upload status.

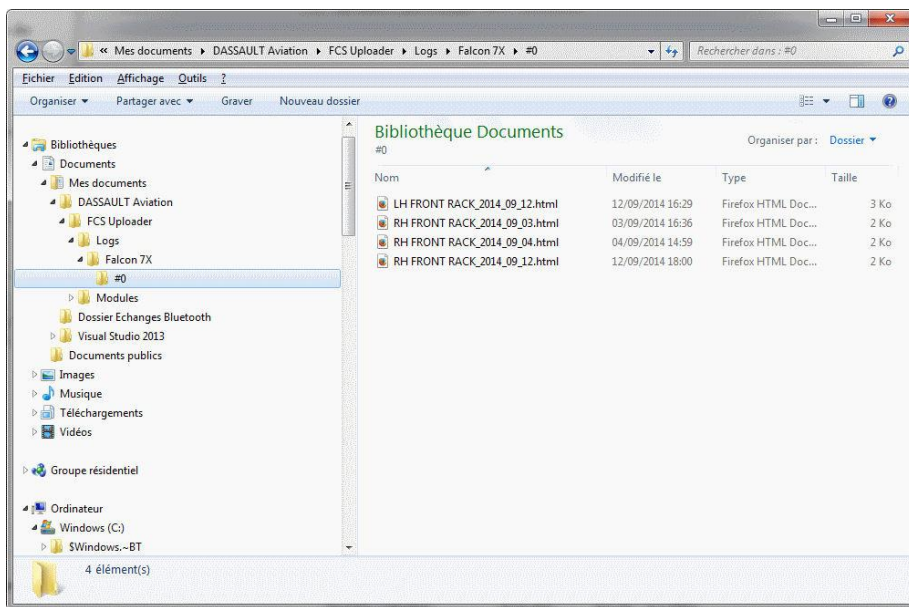
Laptop directory: "My Documents\Dassault-Aviation\FCS Uploader\Logs\Falcon 7X\n°A/C (A/C serial number entered by the operator at the beginning of the procedure)"

See examples on LH FRONT rack in chapter 4.1.4.

If more than one report is recorded in the directory, the last one in time shall be considered.
 This report is to be :

- Printed.
- Commented (if necessary).
- Signed and stamped by the operator.
- Scanned and sent to DSC Support by e-mail (address will be confirmed in the SB).

Moreover the operator shall send to DSC Support by e-mail (address will be confirmed in the SB) **ALL** the “Module by Module” uploading reports available in the Laptop directory:
 “My Documents \ Dassault-Aviation \ FCS Uploader \ Modules”.



NOTE: If no LH FRONT rack module to upload or if LH FRONT rack modules are already uploaded, go to item § 4.2.5 else go to § 4.1.

Fig 4

Uploading RH FRONT Rack report

FIELD UPLOAD RECORD				
Aircraft	Falcon 7X			
Serial number	0			
Uploaded standard	2.3.1			
Rack	RH FRONT RACK			
Date	2014-09-12			
Repair station	DASSAULT Aviation			
Operator	Jérôme CAPPELLE			
Tool	FCS Uploader (v2.0.0.1)			

Slot	Module P/N	S/N	New P/N	Upload status
08	0877X201-01	12	ENS7X201-14	PASSED
09	0877X201-01	10	ENS7X201-14	PASSED
10	0877X201-04	314	ENS7X201-14	PASSED

Results of the aircraft tests specified in the Service Bulletin	
PASSED	FAILED

Comments

Signature	Stamp

4.2.5 Close-up RH FRONT Rack

- On the maintenance panel (1010TP) set the TEST E1 switch (R511CZ) and TEST E2 switch (L511CZ) to the OFF position (DOWN).
 - On the MDU "ELEC" functional diagram, in the C/B status page related to "FLIGHT CONTROLS", set the 1S01 SSPC (FBW LR E3 - 413CZ) on IN (refer to 24-00-00-860-806).
 - De-energize the aircraft (refer to 24-00-00-860-801).
 - Set out the laptop the FCS software media (DDM00101-xx) and keep it.
 - Switch off the laptop.
 - Disconnect the USB cable between the laptop and the Electronic Unit (MEM 40501-xx).
 - Disconnect the hand - held scanner (MEM 40504-xx) from Electronic Unit (MEM 40501-xx).
 - Disconnect the movable connector 128 contacts between RHF interface module (MEM 40505-xx) and Electronic Unit (MEM 40501-xx).
 - Set out the RHF interface module (MEM 40506-xx) from slot 1 of RH FRONT rack.
 - To insert plug in slot 1 of RH FRONT rack with extraction tool (MGB660-xx) refer to Fig 1A bis page 11, proceed as follows :
 - Insert the flight plug with the extraction tool
 - Engage the flight plug by tightening the drive screw (4)
 - Pull the rods (3) to the stop position and remove the extraction tool
 - Check the condition of the claws of the rods (1) (no broken or damaged claws) also check if the fixing screws (2) are present on the bottom of the tool

CAUTION : if a claw or a screw is missing check if the rack does not contain a F.O.D (Foreign Object Debris)
 - Close the RH FRONT rack and install the linings (refer to 27-90-01-900-803 para 8).
 - Install fuse F1 (R9500CZ) of PMAC 1 (R107CZ) and install fuse F1 (L9500CZ) of PMAC 2 (L107CZ) (refer to 24-34-13-960-801 para 6).
- NOTE : Re-engage CB1 of PMAC 1 and PMAC 2 for F8X.
- Close B4 breaker (FBW RR E4 - 614CZ) on the RH Rear SPDB (R2000PM) (refer to 24-00-00-860-807).
 - Take care of the FCS standards labels paperbook (DDM00102-xx) as well as CD ROM (DDM00101-xx).

4.3 Check of the Software P/N after uploading

The uploading of some modules is a part of the FCS standard upgrade covered by a dedicated Service Bulletin.

The Service Bulletin details the impacted modules, the job to do and the checks to perform for the validation of the new standard installation.

Part of these tests is used to validate the uploaded modules.

There will be:

- Execution of the “MODULE TEST” triggered test on the CMC screen “FCS ELECTRONIC FAILURES (1/4)”
A part of this automatic test checks the consistency of all the modules versions (Hardware and Software) with a compatibility table embedded in the MAIC4 module.

- Check on CMC screen “MODULE IDENTIFICATION” of the new P/N of all the modules impacted by the standard upgrade
The operator will have check the compliance between the BS and the displayed references and report them on the Falcon Portal

A test failed causes the display of a dedicated maintenance message (2790EFCS307 “SYSTEM COMPATIBILITY CHECK”) associated with the internal failure upon each failed module.

- A ground test, similar of the pilot test in maintenance conditions

The test closes the maintenance operation and will check the serviceability of the FCS for a flight.

The operator has to fill in the LH FRONT rack and/or RH FRONT rack uploading report the result of the tests performed on the aircraft (PASSED or FAILED).

NEW STANDARD INSTALLATION CHECKLIST

From (name and address) :	To (name and address) :
Aircraft type :	Aircraft s/n :
FCS standard before upload :	FCS standard after upload :
Date of upload :	FCS Uploader tool s/n (MEM 405):

Record and agree the results below to confirm the installation of the new FCS standard has been fully completed

1. Record the Service Bulletin No. for the new FCS standard
2. I agree the PC software has confirmed the software has been loaded to the hardware without error. ☐ Yes ☐ No
3. I agree the original identification labels has been removed and a new identification label has been installed on the modules ☐ Yes ☐ No
4. I agree the new part number of modules has been correctly identified in the CMC ☐ Yes ☐ No
5. I agree the Ground Test of the FCS has been performed and successful ☐ Yes ☐ No
6. I agree the field upload report has been printed and signed ☐ Yes ☐ No

New FCS standard installed by :	New FCS standard witnessed by :
Signature / Stamp :	Signature / Stamp :
Company :	Company :
Date :	Date :