



Canon Colorado M-Series Printer Supplement

This document bridges the gap between the Fiery XF documentation and the Canon Colorado M-Series documentation. Refer to the Installation section before you connect the printer to XF. Please refer also to the documentation shipped with your printer.

Printer Configuration:

Fiery XF Model	Description
Canon Colorado M-Series	<ul style="list-style-type: none">• Color mode: CMYK(Cyan, Magenta, Yellow, Black).• Special inks: White, Gloss(not a physical ink)• Ink type: UVgel ink.

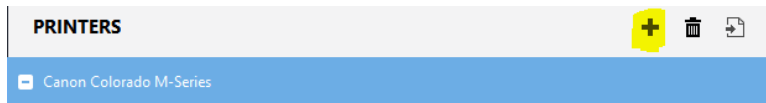
System requirements are as follows:

- The driver is only available for Windows.
- Products based on Fiery XF technology: Fiery XF 8.0
- As license, you need XF Option Group 6
- The following outgoing TCP ports shall not be blocked by a firewall: 80, 8085, 8086, 8090, 9100. Windows blocks most ports if it considers a network as 'Public'.

When you configure the XF output device the first time:

Make sure the printer is on.

In Fiery Command WorkStation, please do the following: Right click on server, click Server Manager. In Server Manager, click Add button on top to add the printer Canon Colorado M-Series. Configure IP address and click finish.

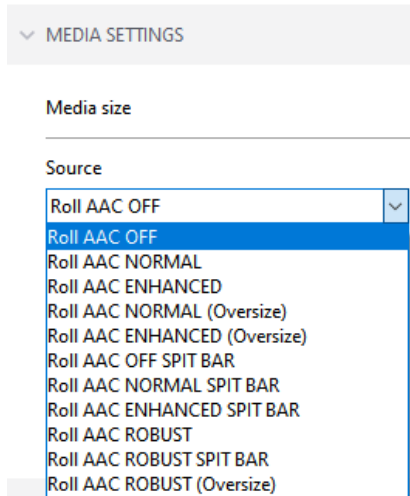


Operation:

The operator settings for this printer is available only through the RIP. User can create new media type, delete, edit or update an existing media type. Also, it is possible to set all media specific as well as printer specific settings from the rip itself. These settings are provided as part of the special printer settings for this printer in XF. Please go through the special printer settings section to understand how to create, modify, delete or update a media type in the printer.

Media Sources:

Following media sources are available for Colorado M-Series:



The media source names are in the format

Roll AAC(Automatic Advance Correction) OFF/NORMAL/ENHANCED/ROBUST(AAC Type) SPIT BAR(to be used with print modes with White Ink or FlxFinish+ print mode) (Oversize)(use minimum margins)

The description of Automatic Advance Correction is as follows:

- When automatic advance correction is activated on a medium, the printer will print yellow or black ink markers that it will use as guidance to correct for media step inaccuracy.
- Using the markers will influence the total printable width.
- For the max speed, high speed and production print modes, the markers have no effect towards advance correction.
- The printer will print the (yellow or black) markers next to the image. The printed image will be clipped if the margin and image size are too small.

The reason for putting AAC in media source:

Each type of AAC requires the printable media size to be different. The margins required for each type of AAC is different. And since Fiery XF manages margins and printable media size using Media source settings, the AAC setting is used with the media source.

The reason for putting SPIT BAR in media source:

Spit bar is an area on the left side of the medium, next to the Automatic Advance Correction markers, that is used to spit droplets from print head nozzles that are used when using the “FLXfinish+” print mode or the print modes that have white ink. Since SPIT BAR also requires an additional 15mm of margin on the left side, it is used with the media source.

Oversize media source:

This is a media source that will have the AAC required to print the markers but will not have the margins required to do so. As the table of AAC below shows, the margins are different for the different AAC types. This media source will have the minimum margins of “Roll AAC OFF” while still having the AAC as selected by user. This will give a bigger printable area than is possible with the given AAC type.

Printing Surface	Max Roll Media Width [mm]	Non Printable Margin [mm]	Max Image Width [mm]	Max Image Height [mm]
Roll-to-roll Colorado M-Series, AutomaticAdvanceCorrection set to None	1625.6 mm	5.3 mm	1615 mm	100,000 mm
Roll-to-roll Colorado M-Series, AutomaticAdvanceCorrection set to Normal	1625.6 mm	8.9 mm	1607 mm	100,000 mm
Roll-to-roll Colorado M-Series, AutomaticAdvanceCorrection set to Enhanced	1625.6 mm	17.5 mm	1590 mm	100,000 mm
Roll-to-roll Colorado M-Series, AutomaticAdvanceCorrection set to Robust	1625.6 mm	22.7 mm	1580,2	100,000 mm

Note: SPIT BAR will add another additional 15mm of margin on the left side.

Media Type:

- Media types are created by the user for each printer and all media types along with their corresponding settings are saved in the rip for future use.
- Media type can be created using the Media management settings in special settings tab.
- There are a lot of settings that are part of the media type. These settings are also available in the special settings tab.
- The printer will only provide media categories to the user. User should create media type for any of these media category before printing.
- All the media related settings are described in the special settings section in this document in the following pages.
- The available media categories provided by printer are:
 1. Paper
 2. Textile
 3. Thick film
 4. Light paper
 5. Heavy paper
 6. Light banner
 7. Canvas
 8. Film
 9. Heavy Banner
 10. Light film
 11. Self-adhesive
 12. Magnetic media
 13. Wallcovering

Print Mode and resolutions:

The different print modes and resolutions used by the printer are the following:

1. Single layer print modes

Print mode name	Layers: Colors	Res X	Res Y	Default Printer Platen Temp	High Density Option	Adhesion Level Option	Unidir Option
Gloss High Key	1: CMYK	300	450	24	no	no	yes
Gloss Express	1: CMYK	300	450	24	no	no	yes
Gloss Speed	1: CMYK	600	450	24	no	no	yes
Gloss Production	1: CMYK	600	450	24	no	no	yes
Gloss High Quality	1: CMYK	600	450	24	no	no	yes
Gloss Premium	1: CMYK	600	450	24	no	no	yes
Gloss Specialty	1: CMYK	600	450	24	no	no	yes
Matte Express	1: CMYK	600	450	24	yes	no	yes
Matte Speed	1: CMYK	600	450	24	yes	no	yes
Matte Production	1: CMYK	600	450	24	yes	no	yes
Matte High Quality	1: CMYK	600	450	24	yes	no	yes
Matte Specialty	1: CMYK	600	450	24	yes	no	yes
Backlit	1: CMYK	600	450	24	no	no	yes
Backlit Density	1: CMYK	600	450	24	no	no	yes
FLXfinish+	1: CMYK + Gloss	600	450	21	no	no	yes

Note about FLXfinish+:

- This print mode supports an additional ink channel, being “Gloss”.
- This is a conceptual ink. The Colorado will not bring an additional physical ink.
- The Gloss highlighting will be done using the existing CMYK inks and combines matte and gloss print strategies.
- This print mode needs SPIT BAR. Hence the correct media source with SPIT BAR mentioned in the name should be selected if this print mode is being used to print.
- Gloss ink settings can be done in special settings tab. Gloss ink data from imported file can be mapped to CLEAR_INK channel in color mapping table or autogenerated in server.

Clear ink printing

Print mode

Spot color CLEAR_INK

Clear ink coverage 100 %

- This is an optional feature in the printer and hence the feature setting “Printing with FLXFinish+ print mode” must be selected to use this print mode.

Print modes configuration

Printing with the FLXfinish+ print mode

Printing with white print modes

2. Print modes for multi layer printing and white ink usage

Abbreviations:

Temp: Default Printer Platen Temperature

HD: High Density Option

Adh: Adhesion Level Option

Uni: Unidir Option

W: White

B: Blocker

Print mode name	Layers: Colors	Res X	Res Y	Temp	HD	Adh	Uni
White Express(CMYKW)	1:CMYKW	600	450	36	no	yes	yes
White Speed(CMYKW)	1:CMYKW	600	450	36	no	yes	yes
White Speed(W-CMYK)	2:W-CMYK	600	450	36	no	yes	yes
White Speed(CMYK-W)	2:CMYK-W	600	450	36	no	yes	yes
White Production(CMYKW)	1:CMYKW	600	450	36	no	yes	yes
White Production(W-CMYK)	2:W-CMYK	600	450	36	no	yes	yes
White Production(CMYK-W)	2:CMYK-W	600	450	36	no	yes	yes
White High Quality(CMYKW)	1:CMYKW	600	450	36	no	yes	yes
White High Quality(W-CMYK)	2:W-CMYK	600	450	36	no	yes	yes
White High Quality(CMYK-W)	2:CMYK-W	600	450	36	no	yes	yes
White High Quality(CMYK-W-CMYK)	3:CMYK-W-CMYK	600	450	36	no	yes	yes
White High Quality(CMYK-W-B-W-CMYK)	5:CMYK-W-B-W-CMYK	600	450	36	no	yes	yes
White Specialty(CMYKW)	1:CMYKW	600	450	36	no	yes	yes
White Specialty(W-CMYK)	2:W-CMYK	600	450	36	no	yes	yes
White Specialty(CMYK-W)	2:CMYK-W	600	450	36	no	yes	yes
White Specialty(CMYK-W-CMYK)	3:CMYK-W-CMYK	600	450	36	no	yes	yes
White Specialty(CMYK-W-B-W-CMYK)	5:CMYK-W-B-W-CMYK	600	450	36	no	yes	yes

Note:

- The white print modes print in layers as shown in the print mode name.
- There is no option to print different or mirrored images in the two CMYK layers of CMYK-W-CMYK print modes.
- CMYKW print mode means CMYK and W inks are printed in same layer by jetting ink drops simulatenously as per the arrangement of CMYK and W print heads.
- CMYK-W/W-CMYK print mode means CMYK and W inks are printed in two separate layers. These print modes will be slower than CMYKW print mode but will have better quality.
- CMYK-W-B-W-CMYK print mode prints 5 layers. The layers are as follows:
 1. Mirrored CMYK image.
 2. Mirrored White channel image.
 3. Blocker channel image.
 4. White channel image.
 5. CMYK image.

- White ink settings can be done in special settings tab. White ink data from imported file can be mapped to WHITE_INK in color mapping table or can be autogenerated in the server.

White ink printing

Print mode

Spot color WHITE_INK

Ink coverage 100 %

Spread and choke 0.00 mm

- Blocker ink settings can be done in special settings tab. Blocker ink data from imported file can be mapped to WHITE_INK2 in color mapping table or can be autogenerated in the server. By default, Bounding box is selected.

Blocker Ink Printing

Print mode

Bounding box

Ink coverage 100 %

- All white print modes will need the SPIT BAR media source and “Printing with white print modes” feature like the “FLXfinish+” print mode.

Special settings:

Following sections are there in special printer settings for this printer.

EPL specific settings: These settings override the settings in epl to allow printing job with updated settings.

Reset to EPL values

Reset to EPL values

Print mode

Media Type

Generic

Resolution

450 x 600

Print mode

Gloss Production

- **Reset to EPL values:** This button will change all epl specific settings to their default values from the epl selected in media tab. If no epl is available, this button will be disabled.
- **Media Type:** User can change media type from the one used in the epl. It must be noted that since all media settings are saved in the epl during profile creation, those settings will be used to print the jobs using that profile. If user wants to modify the settings, then they should clone a media using Create button and then modify the media settings and choose that media name in this setting.
- **Resolution:** User can change resolution for selected media to any value in the list. Default is the resolution in selected epl. If no epl is available, this setting will be disabled.
- **Print mode:** User can change print mode for selected media to any value in the list. Default is the print mode in selected epl. If no epl is available, this setting will be disabled.

Driver status: This area shows information about current and recent activities in driver. The time stamp shows the time at which last activity happened. This is useful to see when profiles have been downloaded, if media information changed, if given commands were successful and other status messages.

Print modes configuration: When the “Printing with the FLXfinish+ print mode” or “Printing with white print modes” option is not installed on the printer, this check box in special settings should also be disabled. This is needed because there is no way for the RIP to find which optional functionality is enabled in the printer. This check box should reflect the state of the optional functionality in the printer.

Print modes configuration

Printing with the FLXfinish+ print mode

Printing with white print modes

Media management settings: Fiery XF contains the master media catalog. Media and dedicated parameters are created/updated in the RIP and then transmitted to the printer. There is no backdoor on the printer allowing the media creation, edition or management. Media must be defined (or imported) from the RIP. Before using any of the command button, please make sure to save your changes, or else changes will not be used.

Media management settings

Media categories:

Media types of selected category:

Merge media types from printer with those in RIP

Sync	Delete	Edit
Create	Update	Rename

Enter media type name to be created:

- **Media categories:** This list holds the media categories and can be downloaded from printer on clicking the Sync button. The list of media categories is fixed, and each category has default media characteristics. It is not possible to change the media category settings.
- **Media types of selected category:** This list holds all the media types of selected media category that were created using the Create button or exist in the printer. The suffix (Printer) will be added to those media types that are coming from the printer and were not created by user in this rip.
- **Merge media types from printer with those in rip:** Enabling this setting will show list of all media types that exist in the printer along with those that exist in the rip when sync is done.
- **Sync:** This button will download all media categories and media types from printer and updates the media list in the printer by either merging the media lists in printer with those in rip or only upload the media list from rip to printer depending on above setting.
- **Delete:** This button when clicked will delete the selected media type from printer and rip.
- **Edit:** This button when clicked will enable the settings below. Since create, update and rename are media editable settings, those will be enabled only when edit button is clicked. However, epl name listed in media types list will not be editable after clicking edit, only updated values from epl will be shown.
- **Create:** This button will create a new media type and add it to the list of media types for selected media category. After adding, this media will be selected by default.
- **Update:** This button when clicked will update media settings values as modified after clicking edit button. Please note that media name will not be updated using this command, Rename button should be used for changing media name.
- **Rename:** This button will rename an existing media type and add also update in the list of media types for selected media category.
- **Enter media type name to be created:** Entering a name here and clicking Create button will add a new media type of given name. Also, entering a new name for a selected media type and clicking Rename button will rename it.

Printer runnability settings: Update of media settings that influence printer runnability will be considered when that media is loaded in the system.

Printer runnability settings

Winding setting:

Automatic media advance:

Suitable for printer cutter:

Manual loading:

Moist protection:

Outer diameter of roll core: mm

Media thickness: um

- **Tight winding setting:** Printer allows to start printing on material before it needs to be taped on the output winder. For some media, this however cannot be achieved because of the nature of the material. For those medias, it requires to be attached to the winder and applied tension to before the actual printing starts. This setting should then be used to specify that it is required and how the tension bar should be used (locked or unlocked). For stiff media the locked positioning is preferred. For weak media the unlocked positioning is preferred.
- **Automatic media advance:** When automatic media advance is enabled, media between the pinch wheels in the drawer and the transport pinch is spooled forward after the media has been idle on the platen for 120 seconds. This prevents dents on media made by pinch wheels.
- **Suitable for printer cutter:** Printer comes with an embedded knife to ease up printer operation and perform straight cut automatically for the operator. This knife can cut through most supported media but not all such as canvas, textile and heavy banners. In case of any cut issue on a specific material, use this setting to disable the usage. The printer will then request operator to perform himself the cutting operation with his own tool.
- **Manual loading:** When manual loading is set, the printer will handle the medium as a medium with an attached header. Width detection will be postponed just before printing to prevent media width detection on the foreign header. Once used, medium is unloaded automatically in order to allow the operator to attach a new foreign header. The printer will not automatically start a new job when this setting is active. The operator needs to feed the medium using the printer UI. ("Media" menu, "Feed" option). When the media is loaded and a job is printed without cutting the media, the printer should start automatically if the next job for that media arrives.
- **Moist protection:** The media setting Moist protection is used to define the sensitivity of media for deterioration by humidity. The range of these setting vary from 0 (not sensitive) to 5 (very sensitive). If the media is left on the printer platen for at least the timer specified, the printer will not print on it and spool forward before printing. This should be used to optimize print quality depending on the material type and humidity levels in the printer room. The values of the moist sensitivity timers:

Moist protection	Timeout after
0	Never. The media is insensitive
1	1800 sec
2	250 sec
3	120 sec
4	120 sec
5	120 sec

- **Outer diameter of roll core:** Printer provides the ability to predict the remaining length on a loaded roll. This technology uses the fact that the media is loaded and transported to give a measurement of the remaining length. This measurement is based on the outer core diameter of the cardboard core, operator should fill this value has measured on the roll to get the most accurate measurement from the printer.
- **Media thickness:** Printer can use specified media thickness for print head (carriage) calibration and media calibration and calculating the remaining media length (together with the outer core diameter). Warning: To avoid media touches and reach optimal print quality, take care to enter the most accurate thickness value provided by the media supplier.

Print quality settings: Update of media settings that influence print quality will be considered when a print is started on that media.

Print quality settings

Automatic media advance correction
Off

Print Gap
Medium

Use white markers
Regular

Suitable for Side edge detection
On

Vacuum strength zone A 0 %

Vacuum strength zone B 0 %

Vacuum strength zone C 0 %

Vacuum strength zone D 0 %

Vacuum strength zone E 0 %

- **Automatic advance correction:** Description for this setting is given under the media source section. This UI will only show the AAC value for selected media. Changing the AAC value here will not have any effect on the AAC type used while printing. The AAC type used while printing will be decided based on the media source selected. This is the only exception of this type in the settings.
- **Print Gap:** The settings Print Gap controls the height of the carriage with respect to the media. The print gap can be set to “Medium” or “High”. Default setting is “Medium”. High position should be only used when experimenting with new media to protect the print system from print head touches with the medium.
- **Use white markers:** When printing transparent or dark media, white markers are needed to run that media. For this media, there is also a change in the calibration jobs – some patterns are printed with white ink. This flag enables both the white markers and the selection of the specific calibration job.
- **Vacuum strength:** Colorado M-Series has 5 vacuum zones as part of the printer platen that enable the printer to adjust for friction while transporting media. In case of media buckle and depending on the location, power can be adjusted.

Print quality per print mode settings: Update of media settings that influence print quality will be considered when a print is started on that media. These media settings are specified per print mode.

Print direction

Adhesion level

Optimized Color Profiling

Printer platen temperature C

Precure power

Postcure power

Pincure power Only used for matte print modes

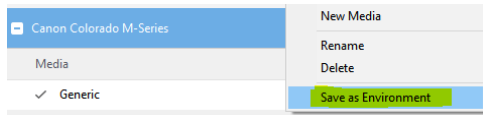
Media advance correction

- **Print direction:** Whether the ink is printed in one direction (mono-directional printing) or in both directions (bidirectional printing). Monodirectional printing solves certain print quality artifacts but has a lower print speed.
- **Adhesion level:** Improves adhesion by increasing pin cure dose and time between printing and curing. The adhesion between ink and media will increase, but the print speed is lower.
- **Optimized Color Profiling:** This feature brings an automated way to perform ink limiting, optimized for maximum gamut while preventing wrinkle. The profiler can choose from a set of Optimized Color Profiling levels during media profiling. For level 2 or higher, the print system performs ink limiting during printing (including the printing of color charts for profiling). When the value is set to 1, ink limiting has to be performed in the RIP/profiler.
- **Printer platen temperature:** The setting printer platen temperature controls the temperature of the printer platen that sits under the printhead carriage and the UV LED carriage. It influences how the ink will behave with regards to pinning and adhesion on the substrate. Increasing the temperature will improve adhesion.
- **Precure power:** Precure power settings of the curing LED units are automatically adjusted for every printing mode. The procure power settings control the curing intensity of the LED for the first part of the curing zone. The default settings are expected to be optimal in most cases, however via the procure power settings, the possibility for adjustment is offered to the user to tune for specific media. *Warning:* setting the power very low might introduce not fully cured prints. Handle the prints with care when changing the power value and check curing quality. Also, the risk of pollution of the printer increases. When experimenting with this setting, wear gloves when removing the medium.
- **Postcure power:** The post cure power settings control the curing intensity of the LED for the subsequent part of the curing zone. In cases where smudge or an insufficient curing level is observed on specific media, it might be beneficial to increase the post cure power. *Warning:* setting the power very low might introduce not fully cured prints. Handle the prints with care when changing the power value and check curing quality. Also, the risk of pollution of the printer increases. When experimenting with this setting, wear gloves when removing the medium.
- **Pincure power:** The pincure power settings control the curing intensity of the LED for the pin curing. This LED is used for matte print modes. In cases where smudge or an insufficient curing level is observed on specific media, it might be beneficial to increase the pincure power. *Warning:* setting the power very low might introduce not fully cured prints. Handle the prints with care when changing the power value and check curing quality. Also the risk of pollution of the printer increases. When experimenting with this setting, wear gloves when removing the medium.
- **Media advance correction:** Manual setting to correct the average step size for a given media and print mode. This should only be used when when media calibration and automatic advance correction do not reach the expected print quality on a given media. In case of light line artifact, go for negative values (smaller step) and in case of dark lines, go for positive values(bigger step).

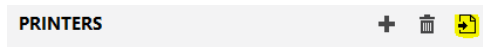
Distribution of printer environment:

Media profiles can be shared by first saving the printer environment in one machine and then loading the same in another machine.

Saving the environment:



Loading the environment:



Distribution of one media profile:

Profile for one media can be created as an epl using Color Tools. Every epl for Colorado M-Series will have embedded information regarding media category, media type and media settings used to create the epl. When such an epl will be available to Fiery XF, the epl name will also be listed in the media types list in special settings.

Media management settings

Media categories:

Paper

Media types of selected category:

Colorado1650_450x600_20200211_135713

This is an epl profile name.

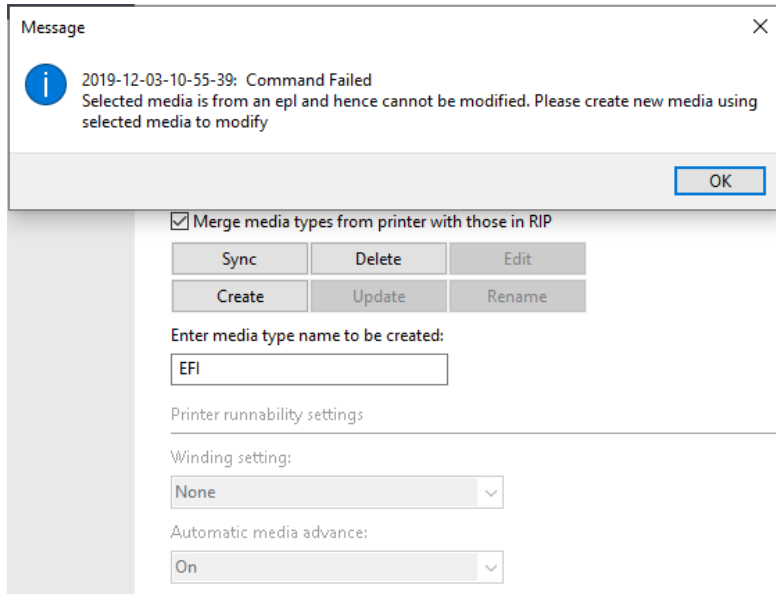
Resulting Calibration(s)

Colorado1650_450x600_20200211_135713_patched.epl

As can be seen, this epl name is listed in media types list.

The reason for this listing of profile name in media types list is because user might want to see what media settings were used to create this epl and modify them. The media settings for selected epl will be updated in the media settings UI when Edit button is clicked.

However, it is not possible to change values for these settings in place for selected epl.



- When an epl name is selected in media types list, jobs will be printed using the media type and settings used to create the epl.
- If user wants to modify media settings of an epl, it is not allowed and above message will displayed. Here, Update and Rename button will be disabled along with all media settings. The media settings will be the same as were used to create the selected epl. User can only see these settings.
- If user wants to modify these settings and print, then they need to select the epl name they want to modify in media types list and create a new media type using the Create button and a new name.
- This will create a new media type with exact same media settings as the epl selected in media types list. User can then click edit on this new media type to modify media settings and print.
- Make sure to select the newly created media type under the “Print Mode” section in special settings tab to use the modified settings of this media type.

FAQs

1. How to download media types from printer?

Enable this setting Merge media types from printer with those in RIP under media management settings in special settings tab and click on Sync button.

2. How to keep media types created only in current XF server?

Disable this setting Merge media types from printer with those in RIP and click on Sync button.

3. Are media settings embedded in epl?

Yes, since XF 7.2. For epls created before XF 7.2, jobs will print but those epl names will not be listed in media types list for viewing and editing. Older epls can be updated to have embedded media settings by doing a relinearization using earlier it8 files and saving the new epl. Please keep in mind to have the correct media type and settings in special settings tab before doing the relinearization.

4. Is it possible to print jobs with different media type than that used to create epl?

Yes, it is possible to select a media type in print mode settings in special settings tab that is not the media type in epl and jobs will print fine. However, a warning will be displayed in Job editor if media type or any media settings are different from the epl media type and media settings.

5. Is it possible to print a job with different media category than that used to create the epl?

No, selecting a different media category and printing a job will error out the job. For correct print, media category should be same as used to create epl and only media type can be different.

6. When will epl name be shown in media types list?

Epl name will be shown in media types list when a new epl is available to select in Media tab. If epl name is not shown in media types list automatically, then clicking Sync button will do. If epl name is still not shown, then it is possible the epl doesn't have embedded media settings information (probably created before XF 7.2).

Troubleshooting:

1. If any discrepancy is seen in media types or media settings, clicking on sync button should resolve that.
2. If the buttons in media management settings are not working, restarting XF server should resolve that.