



Australian Government

ICPPRP430 Manage colour

Release: 1

ICPPRP430 Manage colour

Modification History

Release	Comments
Release 1	This version first released with ICP Printing and Graphic Arts Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to manage colour in pre-press operations to ensure proofs, monitors and final products match.

It applies to individuals who work in the graphic pre-press sector of the printing and graphic arts industry.

They may also take responsibility for production flow and provide leadership and guidance to others with some limited responsibility for the output of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Pre-Press

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1 Identify colour requirements	1.1 Printing conditions are determined to identify colour management requirements 1.2 Printer's requirements are established to guide provision and use of International Colour Consortium (ICC) colour profiles
2 Fingerprint press if printing in a controlled environment	2.1 Suitable test charts are selected 2.2 Test chart is printed with standard ink densities on a range of stock, including non-standard types such as yellow parchment 2.3 Densitometer and/or spectrophotometer is used to examine printed test charts and generate colour profile for that press and that

ELEMENT	PERFORMANCE CRITERIA
	stock
3 Calibrate digital proofing device	3.1 Proofer is linearised for required stock 3.2 Digital test file (eg. IT8 chart) is produced 3.3 Test file is printed on a proofing device and on the type of press that will be used to obtain a proof for both film and direct-to-plate technologies 3.4 Results are measured with a spectrophotometer 3.5 Results are used to generate output profile that allows for dot gain, Grey Component Replacement (GCR), Under Colour Removal (UCR), total gradients and black values
4 Create different monitor profiles using colour tuning package	4.1 A densitometer with screen suction device, if available, and/or appropriate software (OR) are used 4.2 Contrast (white level) and brightness are set 4.3 Red, Green, Blue (RGB) and Cyan, Magenta, Yellow, Key/black (CMYK) and ICC profiles are applied 4.4 Jobs on screen are viewed through appropriate profiles
5 Calibrate scanner	5.1 Test chart (eg. IT8) is loaded 5.2 Scanner input profiling software is used to calibrate scanner (OR) 5.3 All settings are put to zero (0) 5.4 Test chart is scanned and digital proof is outputted 5.5 Spectrophotometer is used to measure proof and ICC profile is generated and loaded into scanning software
6 Calibrate digital camera	6.1 Standard lighting conditions are set up 6.2 ICC target is photographed and digital proof is outputted 6.3 Spectrophotometer is used to measure proof and ICC profile as generated 6.4 ICC profile is loaded into digital camera software
7 Carry out maintenance	7.1 Whole system is checked every two to three months

ELEMENT	PERFORMANCE CRITERIA
	7.2 Monitor calibrations are checked monthly 7.3 Digital proofing devices are checked at least every time ink or paper stock is changed
8 Use colour profiles	8.1 Appropriate profiles are used to ensure colour on monitors, proofs and final product match as closely as possible 8.2 In a controlled environment press fingerprint for final output is used, otherwise digital proofer profile is used 8.3 Colour wedges are included in all files and outputs

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	2.3, 3.4, 3.5, 4.1, 4.2	Recognises and interprets text to establish job requirements from information contained within relevant procedures
Numeracy	2.3, 3.4, 3.5, 4.2, 5.2, 5.3, 5.5, 6.3, 7.1, 7.2	- Uses technological devices to measure and record data and act on results/performance - Interprets numerical measurements of specialised equipment
Interact with others	1.2	Uses appropriate communication protocols and conventions to confirm or clarify printer requirements
Get the work done	1.1, 1.2, 2.1-2.3, 3.1-3.5, 4.1-4.4, 5.1-5.5, 6.1-6.4, 7.1-7.3, 8.1-8.3	- Takes responsibility for planning and organising own workload and assembles required resources - Recognises and takes responsibility for addressing predictable, and some less predictable, problems in familiar work contexts - Analyses results from technical instruments and test samples to diagnose problems or ensure satisfactory completion - Understands purposes, specific functions and key features of complex digital systems and tools and analyses multiple sources of information

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICPPRP430 Manage colour	ICPPP430C Manage colour	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a74b7a0f-a253-47e3-8be0-5d426e24131d>

Assessment Requirements for ICPPRP430 Manage colour

Modification History

Release	Comments
Release 1	This version first released with ICP Printing and Graphic Arts Training Package Version 1.0.

Performance Evidence

Evidence of the ability to:

- manage colour in pre-press operations to ensure proofs, monitors and final products match
- find and use information relevant to the task from a variety of information sources
- produce a portfolio of THREE jobs that demonstrates and provides evidence of:
 - final product printed on various stocks and matching digital proofs on simulated stock
 - monitors are checked to ensure they have different loaded profiles that match the portfolio jobs
 - colour management system maintenance procedures.

Note: If a specific volume or frequency is not stated, then evidence

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- describe WHS issues encountered during colour management for pre-press

Light

- describe how light intensity and colour temperature are measured
- identify standard lighting conditions for matching colour
- list effects different lighting conditions have on: using a monitor, proofing and printing

Colour theory

- describe the difference between Red, Green, Blue (RGB) and Cyan, Magenta, Yellow, Key/black (CMYK) colour
- explain Under Colour Removal (UCR) theory and the effect it has on an image
- explain Grey Component Replacement (GCR) theory and the effect it has on an image

Densitometry and spectrophotometry

- explain densitometry and spectrophotometry measurement
- describe use of International Colour Consortium (ICC) profiles and how they affect output

Scanning theory

- list factors that influence selection of highlight and shadow aim points
- explain why grey balance requirements are determined prior to applying colour correction, and how they are determined
- list factors that determine colour correction requirements

Printing process

- explain why different ink densities are used for different stocks
- describe standard ink densities for different types of jobs
- list affects different stocks have on colour reproduction
- list affects different inks have on colour reproduction for proofing and final production
- describe affects age and configuration of the press (eg. 2-colour vs. 4-colour) have on colour reproduction
- define dot gain and how it affects colour
- explain why final output is affected by the type of press and printing process used
- describe strengths and limitations of different printing processes in colour reproduction

Problem solving

- describe common colour management problems and appropriate solutions
- explain when an ICC profile is included in a Portable Document Format (PDF) file
- describe how using the wrong profile affects output

Information sources

- identify sources of information about colour management.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances must be typical of those experienced in the Pre-Press field of work and include access to special purpose tools, equipment and industry software packages.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a74b7a0f-a253-47e3-8be0-5d426e24131d>