

SIMPLIFYING THE MACHINS

aka Machins 101



© 2010–2022, 2023 Robin Harris
Adminware Corporation
Website: adminware.ca/machins

E-mail: machins@adminware.ca

Updated: April 3, 2023

Price: Free



Robin Harris has been a stamp collector for over 50 years. His first interest was United States, and, like many collectors, his collection has grown to include other countries and specialties ... including the Great Britain Machins.

He developed his Machin website back in 1999 as a means to share information with his father, also a long-time collector. The site has evolved into one of the largest Machin sites. He does not consider himself an 'expert' in this field ... just a *very avid enthusiast* of this fascinating series of stamps.

Robin wears many philatelic 'hats', including:

- editor of the *Unitrade Specialized Catalogue of Canadian Stamps* (since 2005)
- editor of the *Corgi Times* (bi-monthly newsletter of Elizabethan II Study Group of BNAPS) (since 2001)
- editor of *The Canadian Philatelist* (from Jan–Feb 2019 issue)
- author of the *Canadian Stamp News* "Around the World" bi-weekly column (since 2011)
- author of several specialized books on Canadian definitives
- website development (SSC, RPSC, BNAPS, WTSC, VGG, PSSC)
- local and national exhibitor
- life member of RPSC (and *Fellow*), BNAPS (and recipient of *OTB Lifetime Achievement Award*), APS, WPS
- past president and editor of the WPS
- past member of the Canada Post Stamp Advisory Committee

Robin is married with two adult children. His company, Adminware Corporation, develops customized database software (using Microsoft Access) and websites (Dreamweaver, PHP, MySQL). He lives in central Canada.

Note:

- the 'Security Features' checklists, starting on page 8, contain only items that the author has seen; additional examples of recently released varieties may exist.
- this document has always been a 'free' publication. Unscrupulous e-Bay dealers are offering this same document for a fee. Be aware! Do not pay for this document!



My Machin website was awarded the Grand Prix award for the best-in-show digital publication at CAPEX 22, held June 9-12.

Introduction

If you are lucky enough to have in front of you at this moment a “pile” of Great Britain Machin stamps, how would you go about sorting them? Many collectors throw their Machin stamps into a box in the hope of someday tackling just this kind of project. In most cases the stamps sit there without being looked at. Why? Many collectors feel it is just too difficult a task to start!

This document will try to show you that you can tackle this project without these trepidations and stop sorting them when you feel the task becomes too onerous. If, after following through this document, you still feel the job of sorting Machins is “impossible”, I would be more than happy to receive your donation of any Machins you have accumulated so far!



The Great Britain Machin stamps have become one of the longest running series of stamps in the world. First issued on June 5, 1967, they are still being issued with new values today. They are arguably the largest series of stamps available anywhere.

The Machins (pronounced May-chin) are named after Arnold Machin, a sculptor who designed the portrait of the Queen used as the primary design element.

Through this document, we will simplify the collecting of this series and show you how you can build your collection through various stages of development, stopping at whatever level of specialization you desire. We will explore the many different technical aspects of these varieties and show just how easy they are to collect.

More than twenty-five different sorting methods are presented here. These start with the simplest, and most easily identifiable ways of differentiating Machin stamps. The first few sorting methods require no special tools and are all easily recognizable at a glance.

These are methods that my father and I use to sort Machins. You may find a similar set of criteria will work for you.

Contents

Introduction	3
Soak or sort first?	3
Initial sorting	4
Criteria	
1. country	4
2. currency.	5
3. anniversary	6
4. service inscribed	6
5. size	7
6. security features	8
7. denomination	13
8. colour.	13
9. perforation style.	14
10. value size	14
11. revised font	15
12. revised portrait	15
13. self-adhesive vs wag.	16
14. perforation gauge	16
15. printing method.	17
16. phosphor bands	18
17. back prints	19
18. symbol type.	19
19. printer.	20
20. source.	21
21. value type.	23
22. head type	23
23. paper	24
24. screend values	25
25. gum	25
25. security backing paper	25
26. other	26
Machin Timeline.	27
Other resources	30
Album pages	31

Soak or sort first?

If your used Machins are still “on piece” (clipped from the envelope), should you soak them first *before* sorting? We do ... that is, we soak our stamps before we use the sort methods noted in this document.

With that said, if we have just purchased a mission mixture and before we start soaking to remove the stamps from the paper, we do look through the accumulation first to pull out any that are on coloured paper, damaged stamps, etc. While doing this initial perusal of the mixture we do remove any Machins that have “security features” (see sorting method number 6 on page 8). *Attempting to soak security-type Machins will most likely result in damaging the stamps.* Many collectors will not soak these security Machins or will use some other method than soaking in water to remove them from the paper.

Initial sorting

The first nine sorting methods are easily recognizable with just a single glance. My father prepared a large cardboard sheet (about 4 feet by 4 feet) divided into squares of about 2 inches each. Examples of the most common denomination and colour are represented in each square.

Sorting a pile of Machins by denomination/colour/perforation style, and thus, the first nine sorting criteria, is extremely quick and efficient.

If your initial sorting is based on just the first six criteria, then these might be interchangeable. That is, while sorting the pile of stamps in front of you, you will create up to six smaller piles, each containing one of the following sorting criteria:

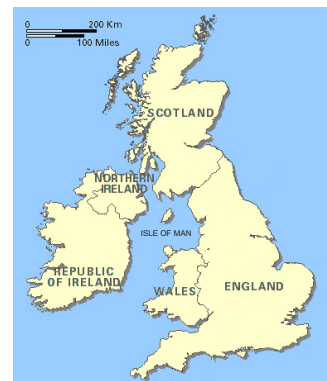
- | | |
|--------------------------------|----------------------|
| 1. country | 7. denomination |
| 2. currency | 8. colour |
| 3. anniversary ('double head') | 9. perforation style |
| 4. service inscribed | |
| 5. size | |
| 6. security features | |

1. Country

Machin stamps have been issued for five different 'countries':

- Great Britain
- Isle of Man
- Northern Ireland
- Scotland
- Wales

The latter four are referred to as regionals. Each of the four regionals are easily identified by their respective icon printed at the upper left corner of the stamp.



Isle of Man
Three Legs of Man



Northern Ireland
Right Red Hand of Ulster



Scotland
Lion of Scotland



Wales and Monmouthshire
Dragon of Wales



2. Currency

Pre-decimals

When the first Machin stamps were introduced in 1967, Great Britain was still using the sterling currency, where twelve pence equaled one shilling and twenty shillings equaled one pound. These three units were known as 'L.s.d.' (from the Latin: *Libra, solidi, denarii*).



On the Machin stamps, pence was indicated with a 'd'; shilling was shown as 1/-; and the pound symbol is written as £.

There were 16 pre-decimal Machin definitives in the small format and four in a larger size.

All pre-decimal stamps, except the £1, were withdrawn on November 25, 1971 and were invalidated on March 1, 1972.

Decimals

Decimal currency, introduced on February 15, 1971, has 100 pence to one pound. The letter p, for pence, is normally used only for amounts of less than £1. Amounts above £1 are written as, for example, £1.20. The system included a halfpenny ($\frac{1}{2}$ p), until the end of 1984.



Starting in mid 1997, regional stamps from Wales began to appear without the designation of 'p' after the value. In 2000, a Wales 1st non-value indicated stamp was issued in a bilingual format (I AF/ST). [These are *not* errors.]

Wales stamps with and without "P":

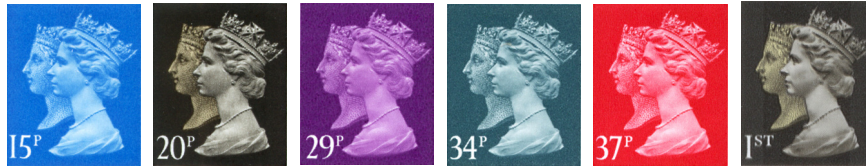
- 20p light green
- 26p rust
- 37p amethyst
- 63p emerald



Bilingual 1st non-value indicated stamp for Wales

3. Anniversary ('double head')

A special 'commemorative definitive' was issued in 1990 to celebrate the 150th Anniversary of the introduction of the uniform penny post. These are the same size as normal definitives but have the head of Queen Victoria as well as the Machin head. Five values were released in 1990; a sixth value (1st) appeared in 2000 on the 160th anniversary of the first postage stamp.



The Penny Black
Queen Victoria

4. Service inscribed

Six different types of service inscribed stamps have been released to date:

- Europe (E)
- air mail chevron
- special delivery
- recorded signed for
- Royal Mail signed for
- Large (Pricing in Proportion)



2021: 2D data matrix code



5. Size

By far, the vast majority of Machin stamps have been issued in a “small”, standard postage-stamp size. However, different sizes have been issued over the years.

The early high-value stamps, through 1977, were of a larger size. Different service inscribed Machins are a different size from the standard Machins.

A *very large* “Horizon Gold” label, tested in 2009 and released in a countrywide roll-out in 2010, included the Machin design.

[The stamps shown here are at actual size.]



6. Security features

Starting in 2009, some of the Machins began to appear with security features; either background text, U-shaped “slits”, or (in most cases) both. High-value definitives, and, starting in 2011, new low-value self-adhesive printings, include some of these security features.

The background text reads ROYALMAIL in wavy lines (or DIAMONDJUBILEE for the 2012 issues). Various year and source codes began to appear in 2010. The 1st and 2nd non-value indicated stamps have the most varieties.

Your initial sorting would be to identify those stamps with security features. If you wish to specialize further, you could look for the various year and source codes, and different breaks in the U-cuts.



Security codes in background text (10 and S), with U-shaped security slits

Warning: One of the purposes of the security slits is to “damage” the stamp when soaked so that it cannot be re-used; you may want to leave any of these used Machins “on piece” rather than soaking.

		Self-adhesive with security slits	WAG, no slits
	Year	None	P
1p dark maroon	12	•	
	13		•
	14		•
	15	•	•
	16	•	
	17	□	
	18	□	• / M IL
	19	□	•
	20	□	•
	21	□	
2p dark green	12	•	
	13		•
	14	•	•
	15	•	
	16	•	•
	17	• □	
	18	□	M IL
	19	□	•
	20	□	•
	21	□	•
5p ash pink	12	•	•
	13		•
	14	•	
	15	•	•
	16	•	•
	17	□	•
	18	□	M IL / P
	19	□	•
	20	□	•
	21	□	•

		Self-adhesive with security slits	WAG, no slits
	Year	None	P
10p light tan	12	•	•
	13	•	•
	14	•	•
	15	•	•
	16	•	•
	17	• □	
	18	□	M IL
	19	□	•
	20	□	
	21	□	•
20p light green	12	•	•
	13	•	
	14	•	•
	15	•	
	16	•	
	17	□	•
	18	□	• / M IL
	19	□	
	20	□	•
	21	□	•

		Self-adhesive with security slits		WAG, no slits
	Year	None	P	P
50p light grey	none	•		
	10		•	
	11		•	
50p slate grey	12	•		
	13			•
	15			•
	17	□		
	18			•
	19	□		•
	20			•
68p sea green	21			•
	11	•		•
76p bright pink	12	•		•
	12	•		
78p orchid mauve	13	••		
81p holly green	14	•		
81p sea green	14			•
87p orange	12	•		•
88p amber yellow	13	••		
97p purple heather	14	•		•
£1.00 ruby	none	•		
	11	•		
	12	•		
	17			•
£1.00 wood brown	12	•		•
	14	•		•
	15	•		•
	16	•		
	18	□		
	19	□		
	21	□		•
£1.05 gooseberry green	16	•		•
£1.10 lime green	11	•		
	12	†		
£1.17 sunrise red	17	• □		•
	18			M IL
	19			•
£1.25 holly green	18	□		• / M IL
£1.28 emerald	12	•		
	13	•		
	14	•		
£1.33 amber yellow	15	•		•
	16	•		
£1.35 orchid mauve	19	□		•

Source codes:

(none): counter sheet
Business sheet
Custom booklet
booklet of **F**our stamps
booklet of **E**ight stamps
booklet of **S**ix stamps
booklet of **T**welve stamps
Rolls of 10,000 stamps
Prestige booklet
Miniature sheet

		Self-adhesive with security slits		WAG, no slits
	Year	None	P	P
£1.40 dark pine green	17	• □		•
£1.42 garnet red	20	□		
£1.45 dove grey	18	□		M IL
£1.47 dove grey	14	•		
£1.50 terracota	none	•		
	21			•
£1.52 orchid mauve	15	•		
£1.55 marine turquoise	18	□		•
	19	□		
£1.57 tarragon green	17	• □		
£1.60 amber yellow	19	□		
£1.63 sunset red	20	□		•
£1.65 sage green	11	•		
	12	†		
£1.68 tarragon green	20	□		
£1.70 marine turquoise	21	□		•
£1.88 sapphire blue	13	••		
£1.90 amethyst	12	•		
£2.00 slate blue	none	•		
	13	•		
	19	□		
£2.15 marine turquoise	14	•		
£2.25 plum purple	15	•		
	16	•		
	18	□		
£2.27 harvest gold	17	• □		
£2.30 gooseberry green	19	□		
£2.42 purple heather	20	□		
£2.45 spruce green	15	•		
£2.55 garnet red	17	• □		
	20	□		
	21	□		
£2.65 purple heather	18	□		
£2.80 spruce green	19	□		
£2.97 rose pink	20	□		
£3.00 purple	none	•		
	19	□		
£3.15 aqua green	15	•		
£3.25 aqua green	21	□		
£3.30 rose pink	15	•		
£3.45 dark pine green	19	□		
£3.60 bright orange	19	□		
£3.66 harvest gold	20	□		
£3.82 holly green	20	□		
£4.20 plum purple	21	□		
£5.00 grey blue	none	•		
	19	□		

□ Security Backing Paper

† one mint counter sheet of each exists (by Deegam)

Non-value indicated		Self-adhesive with security slits								WAG, no slits		
	Year	None	B	C	S	T	R	P	F	P	R	M
Ist gold	none	•	•	•	•	•	•					
	10	•	•	•	•	•	•	•			•	
	11	•	•	•	•	•		•		•		•
	12					•	•					
Ist Large gold	none	•	•						•			
	10	•	•						•			
	11	•	•						•			
Ist diamond blue	none	•	•	•	•	•				•		•
Ist Large diamond blue	none	•	•						•			
Ist Royal Mail red	12	•	•	•	•	•	•					
	13	•	•	•	•	•	•			•		
	14	•	•	•	•	•						
	15	•	• □	•	•	• □				•		
	16	•	□		□	□				•		
	18									•		
	16 _R	□	□	□	□	□				•		
	17 _R	□	□	□	□	□				•		•
	18 _R	□	□	□	□	□						
	19 _R	□	□	□		□						
	20 _R	□	□	□	□	□				•		
	21 _R	□	□	□	□	□				•		
Ist Large Royal Mail red	12	•	•						•			
	13	•	•						•			
	14	•	•						•			
	15	•	• □						• □			
	16	•	□						□			
	16 _R		□						□			
	17 _R	□	□						□			
	18 _R	□	□						□			
	19 _R	□	□						□			
	20 _R	□	□						□			
	21 _R	□	□						□			
Ist amethyst purple	15	•		•	• □							•
	16	•		□	□					•		
	Year	None	B	C	S	T	R	P	F	P	R	M

§ only used copies reported

□ Security Backing Paper R - Royal Mail Red shade w/9% black added

Examples of security codes (these are usually best seen when the stamps are held at an angle)



Year: 18 – “M18L”



Year: 19 – “M19L” / “MCIL”



Year: 18 – “M18L” / “M IL”

Non-value indicated		Self-adhesive with security slits								WAG, no slits		
	Year	None	B	C	S	T	R	P	F	P	R	M
2nd light blue	<i>none</i>	•	•			•	•					
	10	•	•			•	§	•			•	
	11	•	•			•						
	12	•	•			•	••					
	13	•	•			•						
	14	•	•			•						
	15	•	• □			• □	•			•		
	16	•	□			□						
	17	• □	□			□				•		
	18	□	□			□						
	19	□	□			□				•		
	20	□	□			□				•		
2nd Large light blue	21	□	□							•		
	<i>none</i>	•	•						•			
	10	•	•						•			
	11	•	•						•			
	12	•	•						•			
	13	•	•						•			
	14	•	•						•			
	15	•	•						•			
	16	•	□						□			
	17	□	□						□			
	18	□	□						□			
	19	□	□						□			
	20	□	□						□			
	21	□	□						□			
	Year	None	B	C	S	T	R	P	F	P	R	M

§ only used copies reported

□ Security Backing Paper R - Royal Mail Red shade w/9% black added



Year: 20 – “M20L” / “MBIL”

Special Delivery (self-adhesive with security slits)	Year	None
Up to 100g	10	•
	14	•
	15	•
	16	•
	17	•
	18	□
	19	□
	20	□
Up to 500g	10	•
	14	•
	16	•
	18	□
	20	□

Recorded Signed For (self-adhesive with security slits)	Year	None
1st	none	•
	10	•
1st Large	none	•
	10	•

Royal Mail Signed For (self-adhesive with security slits)	Year	None
1st	13	•
	15	•
	16	•
	17	□
	19	□
	20	□
1st Large	13	•
	15	•
	16	•
	17	•
	18	□
	20	□



Year: 18 – “M18L”



Year: 18 – “M18L”

2D data matrix barcode	Year	Self-adhesive with security slits	
		None	P
1p sapphire blue	22	□	
2p dark green	22	□	
5p purple heather	22	□	
10p aqua green	22	□	□ ¹
20p light green	22	□	□ ¹
50p slate grey	22	□	□ ¹
£1.00 wood brown	22	□	□ ^{1,2}
£1.85 wood brown	22	□	□ ¹
£2.00 light blue	22	□	□ ¹
£2.55 sapphire blue	22	□	
£3.00 purple	22	□	
£3.25 purple	22	□	
£4.20 light green	22	□	
£5.00 spruce green	22	□	
	Year	None	P

□ Security Backing Paper
 | interrupted die cuts
² two varieties

2D data matrix barcode	Year	Self-adhesive with security slits				
		None	B	E	F	P
1st plum purple	22	□	□	□	□	
2nd light blue	21		□			
2nd holly green	22	□	□	□		□ ¹
1st Large marine turquoise	22	□	□		□	
2nd Large dark pine green	22	□	□		□	
	Year	None	B	E	F	P

□ Security Backing Paper
 | interrupted die cuts



Year: 21 – “M21L” / “MB1L”

7. Denomination

Machin stamps have appeared in denominations ranging from ½p to £5 values. New values are still being added annually due to increased postal rates. Denominations are issued to meet specific postal rates for both domestic and international mail.

Non-value Indicators

Non-value indicators (NVIs) were introduced in August 1989 to straddle postage rate increases and are valid indefinitely. Over the years, different NVI 'values' have been issued: 1st for first-class domestic mail; 2nd for second-class domestic mail, and E for mail destined to Europe (since discontinued), "airmail" and service inscribed.

Service inscribed

In 2003, a new style of Machin was introduced that included the type and destination of service that the stamp fulfilled. A red and blue chevron bar appears down the right edge of the stamp. The Queen's design and inscriptions are placed on a white background. Other service inscribed stamps have appeared since. These were discussed previously in step 4.



8. Colour

Twenty colours were used for the first Machin (pre-decimal) issues. They were decided upon following exhaustive tests for ease of recognition.

When decimal Machins were introduced, 14 colours were selected from a field of 25 previously selected colours. As inflation caused tariffs to alter at frequent intervals, the number of values increased, as did the requirement for new colours in order to avoid confusion with others recently abandoned. Consequently, the number of different colours employed over the next 16 years increased rapidly and in 1988 the Post Office completed a major review of colour policy.

In 1984, the Post Office asked Jeffery Matthews to carry out a review of the colours used for the low value definitives. By 1988 a list of 30 colours was allocated by Royal Mail. Even a palette of 30 colours proved to be inadequate. By 1999 some new colours were devised. Other colours, not devised by Matthews, were created for mainly temporary purposes. Among these is black, used for some of the stamps issued in 1990 on the 150th anniversary of the Penny Black.

A colour change in a decimal stamp is usually the result of it being re-issued after a period of obsolescence because a revised tariff has re-created a need for it, and it will usually prepay a different service. Royal Mail has a long standing rule which requires that a value may not change colour without a gap of at least three months.

The vast majority of Machins are single colour. However, two pre-decimal and eight decimal values have appeared bi-coloured.

In late 2016, the 1st Royal Mail Red stamps had the red colour 'tweaked' by adding 9% black to the mix, giving them a bit of a darker red appearance.



Left: original 'red'
Right: revised Royal Mail
Red colour (Oct 2016)

9. Perforation style

A very distinctive change in perforation style was introduced in Great Britain in 1992 on the high value Castle stamps. An elliptical perforation shape was included on the sides of the stamps as a means to thwart forgery.

Elliptical perforations were added to small format Machin definitives from all printers contracted to Royal Mail on April 6, 1993. All have a 3-hole ellipse on the left and right sides, below the mid-point. In 2013, two values (5p and 50p) from a 'prestige booklet' were accidentally printed with *inverted* elliptical perfs.



Elliptical perf



Inverted elliptical perf



The next four sorting methods may require a bit more of a "quick glance", but with practice, are still very easy to determine. These methods will allow you to sort the specific issues a bit further with a minimal amount of work.

10. Value size

In 1983 newly designed, *narrow* numerals, began to appear. This design change was necessary because the higher values (eg. 20½) took up too much room on the stamp! Seven Machin values exist with wide and narrow values:

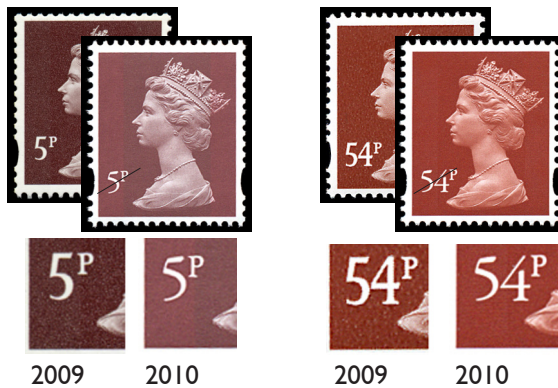
- 2p green
- 3p shocking pink
- 4p turquoise
- 10p orange
- 20p purplish grey
- 26p post office red (and regionals)
- 75p black



11. Revised font

Two values, issued in January 2010, accidentally had a different font used for the values.

The 5p and 54p stamps had been previously issued with the same colours. The 2010 printing from a *prestige*-type booklet produced these two interesting varieties.



Pane from *Classic Album Covers* prestige booklet
[image reduced to 50%]

12. Revised portrait

By 1997, all of the printers of Machin stamps had switched from using photography to produce their gravure printing plates to images being engraved directly on the cylinder under computer control. This electromechanical engraving is more commonly known by its acronym of EME.

The result is that the new EME images offers better detailing of the Queen. Once you have reference copies, the differences between the 'old' and 'new' EME image are quite noticeable.

Several values exist with either the original or EME image:

- 1p crimson
- 2p deep green
- 4p cobalt blue
- 5p ash pink
- 6p lime green
- 10p light tan
- 19p olive green
- 20p light green
- 26p rust
- 30p sage green
- 31p purple
- 37p amethyst
- 39p shocking pink
- 43p dark brown
- 50p sand
- 63p emerald
- £1 mauve
- 1st flame
- 2nd light blue



Top: original design
Bottom: EME image

13. Self-adhesive vs. Water-activated gum

Self-adhesive stamps are *die cut* around the entire stamp during the printing process. On Machin stamps, all die cutting resembles perforated stamps.

A close look at the perforations will indicate if the stamp was torn from an adjacent stamp (i.e. a water-activated gum stamp) leaving rough edges of paper fibres. On a self-adhesive stamp, all simulated perforations on all four sides will be 100% clean looking.

By 2002 most first-class Machins were self-adhesive. In 2009 the high-value Machins were released in the self-adhesive format. In 2011, low-value Machins began appearing in a self-adhesive format.

With a little bit of practice, differentiating between water-activated gum and self-adhesive stamps is quite easy.



14. Perforation gauge

Here is our first sorting method that *may* require a philatelic tool to identify various varieties. Only the small format, water-activated gum, Machins exist with different perforations — all of the large size Machins come with only one perforation so they are of no concern here.

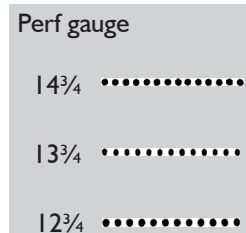
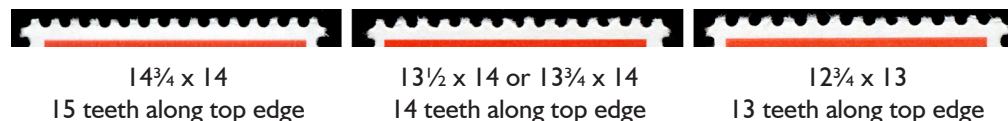
Technically, a perforation gauge is *not* required to check the various perforations used on Machins — just count the number of perfs across the stamp. However, having a perforation gauge will certainly speed up this task.

If you don't have a perforation gauge you could use a known-Machin (i.e. one that only comes one way) as a template for 'perfin'g'.

Three different perforations have been used on the small-sized Machins:

- $14\frac{3}{4} \times 14$ (usually referred to simply as 15x14)
- $13\frac{1}{2} \times 14$ or $13\frac{3}{4} \times 14$ (usually referred to simply as 14)
- $12\frac{3}{4} \times 13$ (only one stamp comes this way, done in error: Ist flame)

Several of the Machins exist with two different perforation varieties. Only the Ist flame value/colour comes with all three:



Now it starts to get a bit trickier. A magnifying glass will be needed for this next sorting criteria. It will, however, be quite easy to differentiate the different types of printings on the specific issues. It will be well worth your time to sort your Machins by the printing method.

15. Printing method

Several different printing methods have been used on the Machin stamps, generally because of the need to have several different printing companies employed to print the many stamps that are required.

Most of the Machins are printed using *photogravure*. The second most popular method is *lithography*. This is followed by *engraved* (intaglio) for several of the high-value Machins. A *Profile on Print* prestige booklet released in 1999 to celebrate the printing of Machins included NVI Machins printed by the above three methods as well as *typographed* and *embossed*. The *50th Machin Anniversary* Prestige booklet issued in 2017 included a *gold foil embossed* stamp.

Photogravure

Photogravure stamps show more tones than those printed by lithography. This is due to the different printing methods. Photogravure plates use recesses of various depths to give different colour tones. Two different methods of preparing the plates/cylinders were employed for Machins: camera and computer.

Lithography

Lithographed plates don't have recesses and thus, usually result in 'flat' looking images.

The easiest place to tell the difference between photogravure and lithographed stamps is in the denominations. Lithographed stamps produce a very sharp, clean-edge to the value while photogravure stamps have a 'bumpy' edge to the value (it is actually the 'cells' from the printing process that 'intrude' into the white space).

A 10 power magnifying glass will be required to separate the photogravure and lithographed stamps apart. About 40 different Machins come both photogravure and lithographed.

Engraved

Engraved (intaglio) is a form of stamp printing where the ink is carried in depressions below the surface of the plate. The ink is picked up from the depressions in the printing medium by the paper. Consequently the coloured portions of the design on the printed stamp are slightly raised.

The high-value Pre-Decimal Machins and early high-value Decimal Machins were engraved. The four small-size high-value Machins (released from 2001 to 2003) were printed both photogravure and engraved. The photogravure stamps show a more solid background composed of "dots" throughout the face, hair and crown. The engraved stamps are composed of strokes or lines of print.



Typographed



Gold foil embossed



Photogravure



Lithography



Photogravure



Engraved

16. Phosphor bands

Phosphor bands are applied to the stamp in an effort to trigger cancellation and sorting equipment. Various styles of phosphor have been used throughout the Machin period. The treatment of mail depends on the number of bars on the stamps.

After trials in 1959, the standard widths of phosphor bands were set at 4mm on stamps to prepay the second-class rate while 8mm bands were printed down the vertical perforations giving two 4mm bars, one each at the left and right sides of the stamp, for the first-class rate. In 1967 the width of the bands producing two-bar stamps was increased from 8mm to 9.5mm. This standard was reversed in 1977, when 8mm again became the norm for these printings.

A single-band may appear at the left, centre or right side of the stamp. In fact, some values exist with all three varieties.

Variations of the above exist, including some Walsall booklet panes which had 8mm bands made up of two 3.5mm bands with a 1mm gap between. These are referred to as 'split' bands.

Machin stamps that come from a booklet containing several different denominations pose another source of many phosphor band varieties. In order that the phosphor band(s) on one stamp did not encroach onto an adjacent stamp that required a different number of bands, *short*, *inset* or *notched* bands appeared — these begin to fall into the more specialized collecting of Machins.

Over the years various experimentation has been done with the inks used to print the phosphor bands. As a result, different *colours* of phosphor bands have appeared. These include yellow, blue and violet shades, all of which are identifiable when exposed to ultraviolet light.



2-band



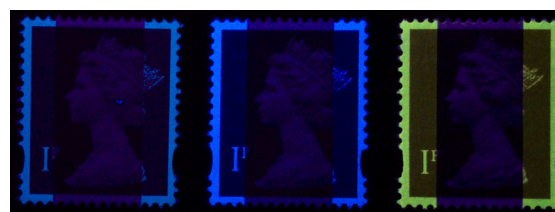
Centre band



LB (inset)



Right band



Phosphor bands as viewed under an ultraviolet light

I tend NOT to use a UV light to identify the 2-band vs Centre-band tagging on the early Machins ... or at least I try to do it with 'natural' or standard room lighting as often as possible (this may not work all of the time).

Below are two images; the stamps were held in front of me and rotated until the fluorescent light above me reflected off the stamp in such a way that the tagging showed up. This is a very quick and easy process to sorting these kinds of early phosphor tagging varieties.



Centre band



2-band

The study of phosphor bands will require an ultraviolet light.

It will open up a whole new world to your Machin collecting and give you many, many more varieties to look for.

17. Back prints

On a few occasions Machins have appeared with “back prints” — 3 such designs have been used. These stamps indicated they were sold at a discount. This back print was printed on top of the gum. As such, you may not find many examples on *used* Machins since soaking the used stamp from its envelope/cover/piece removes the gum at the same time.



Backprint: D

- 16p mushroom
- 17p blue grey



Backprint: Star (Type I)

- 12½p pastel green
- 15½p pale violet



Backprint: Star (Type II)

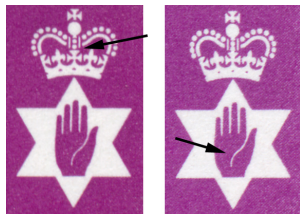
- 12p emerald green
- 12½p pastel green
- 13p reddish brown
- 17p blue grey

These three sorting criteria are very specific to a small number of Machins. You will only need to consider them from time to time, yet they are relatively easy to determine.

18. Symbol type

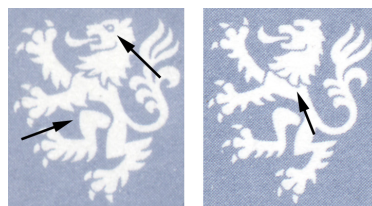
As noted previously, the Regional Machin stamps include a symbol in the upper left corner of the stamp.

Three of the four countries have a few stamps that exist with two different symbol types (only the Isle of Man does not have different symbol types). A 10 power magnifying glass will be required to spot these differences.



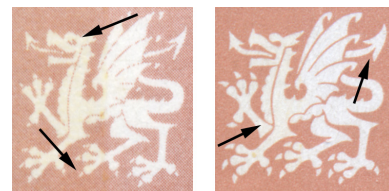
Northern Ireland
Type I Type 2

- 17p blue grey
- 28p greyish violet
- 31p deep lilac



Scotland
Type I Type 2

- 13p reddish brown
- 17p blue grey
- 22p moss green
- 31p deep lilac



Wales
Type I Type 2

- 13p reddish brown
- 17p blue grey
- 28p greyish violet

19. Printer

Until 1981, all Machin stamps were printed by Harrison & Sons. Since then several other companies have been used: De La Rue, Enschedé, Questa, Walsall, Cartor.

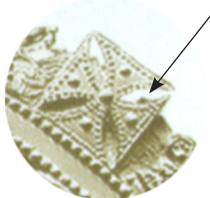
On a few stamps, notably the 1st Millennium and the 'small' high-value engraved stamps, several varieties can be determined based on different printers. Subtle differences exist between the printings of these various printers that allow the specialist to identify the different printings.



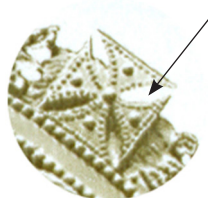
Millennium Machin

Millennium Machin printer differences

Check inside the top right of the central cross



De La Rue & Questa



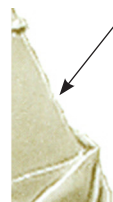
Walsall

If there is a spot of dark colour then it is either De La Rue or Questa; Walsall does not have this spot.

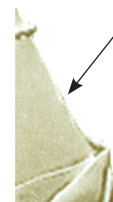
Check the back of the neck



De La Rue



Questa



Walsall

If it is smooth and distinct then it is De La Rue; Questa shows two lines down the back of the neck; Walsall shows portions of a second line.

High-value Engraved Machin printer differences

Enschedé



Enschedé

White line to right of figure 1

De La Rue



De La Rue

Solid colour to right of figure 1



Enschedé

Line at base of £ is full length; arc inside 2 is complete



De La Rue

Line at base of £ has break at left; arc inside 2 has break



Enschedé

Horizontal in curve of figure 3



De La Rue

No horizontal line in 3



Enschedé

White lines at top and inside curve of figure 5



De La Rue

More solid colour around £ and figure 5

20. Source

The vast majority of Machin stamps come from booklets. Other sources include the typical sheet (panes of 25, 50, 100, 200 or 240 stamps) and coils (rolls). The rising popularity of self-adhesive stamps with the buying public has seen several Machin stamps issued in this format.

Identifying the source of a stamp is important to differentiate the many Machin varieties. A 10 power magnifying may be required at this stage.

[A select number of Machins have appeared in certain booklets with one or two *imperforate sides* (i.e. straight edges). These are easily recognized.]

A close look at the perforations will tell you whether the stamp is self-adhesive (step 13), or, if not, whether it came from a sheet or coil or booklet.

Machin stamps that come from water-activated coils and certain booklets are separated (during the printing process) by *cutting* down the middle of the perforations (or as close as possible to the middle of the perfs). Coils will have two opposite sides cut in this manner while booklets will have one, or two adjacent sides cut.

Stamps that are separated by the public will be *torn*, leaving a ragged edge to the perforations (and typically small paper fibers). Thus, a stamp that is torn on all four sides must come from a sheet (with the exception of a few *prestige* booklets); a stamp that is torn on two opposite sides but cut on the other two sides must be from a coil; similarly, a stamp cut on one or two adjacent sides but torn on the other sides it from a booklet.



Booklet pane
Cut around edges of pane



Multi-value coil
Cut at top and bottom



2nd horizontal coil
Cut at top and bottom



Prestige booklet pane (image reduced by 50%)
Stamps are torn from pane

Torn edge
(ragged perfs)



Cut edge
(straight perfs)



Single from booklet
Imperf edge at top

In most cases, the source of a stamp can be determined with a close look at the edge of the perforations. If you have many Machins to sort through of certain values, then this sorting method will allow a level of specialization that is relatively easy to study and learn.



Left: water-activated gum pane
of 200

21. Value tablet

A specialized study of Machins is not complete without looking very closely at the value tablet. A 10 power (or better) magnifying glass will be required to spot these.

Some stamps exist with 'thin' and 'thick' value types. Although the differences may be slight in some cases, they do create a collectible variety.

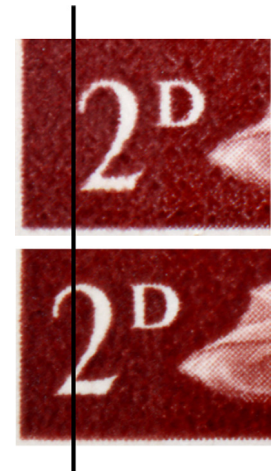
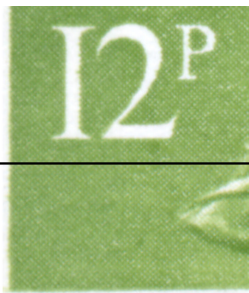
Other Machin stamps exist where the value is set 'high', 'low' or 'middle'; also 'left', 'right', or 'close' to the Queen's bust.



Thick elements



Thin elements



Bottom: value is set too far to the left

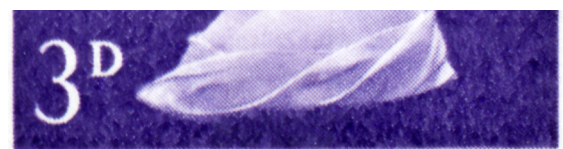
A magnifying glass and a measuring tool will be required to determine the value tablet type and location. In some specific cases, if you create a template by cutting a damaged specimen, you can use this as your "measuring tool".

22. Head type

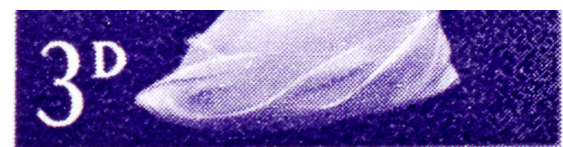
Various head types, referring to the portrait of the Queen, have been used over the years. This is due in part to the different printing methods employed and the amount of room available on the stamp to print the image (due to regional symbols, value size, etc.).

A few stamps do exist with more than one head type. Although the differences can be subtle, the different head types are in effect a different design (technically speaking).

The illustrations at the right are just *one* example of different head types found on several values. There are others. A detailed reference book, such as the *The Complete Deegam Machin Handbook* provides the necessary information.



Head A
Base of bust is flat



Head B
Base of bust is rounded

- 1d yellow ochre
- 3d spectrum violet
- 4d olive sepia
- 4d vermilion
- 5d stewart blue
- 6d purple

23. Paper

Various types of paper with different attributes have been used for the Machin stamps. This is perhaps the hardest feature to learn. This list is in alphabetical order.

Of all the sorting criteria listed so far, the determination of “paper” is by far the most difficult. You may simply decide to ignore this criteria rather than pulling your hair out!

- **ACP:** ‘A’ (or Advanced) Coated Paper. Under short wave ultraviolet light it is very white in appearance and gives a strong afterglow.
- **Contractor’s paper:** A paper supplied by Bradbury Wilkinson for some recess (intaglio) printed high values in 1973. It was more heavily coated than that previously supplied by the Post Office (POP paper).
- **FCP:** Fluorescent Coated Paper. A chalk coated paper with an added optical brightening agent. Slightly whiter appearance than OCP.
- **OCP:** Original Coated Paper. This is a chalk coated paper with little or no optical brightening agent. It is off-white or creamy and has a dull reaction to short-wave ultraviolet light. It was gradually replaced by FCP starting in 1971.
- **OFNP, OFPP:** OBA-Free Non-Phosphorised Paper, and OBA-Free Phosphorised Paper respectively. A paper with no Optical Brightening Agents. From April 1993, there was a general introduction of OBA-free paper.
- **OFPP:** OBA-Free Phosphorised Paper. A phosphorised paper with no Optical Brightening Agents.
- **POP:** Post Office Paper. A term given to various chalk coated papers supplied by the Post Office for printing some early Machins by the recess process. It was replaced in 1973 by paper supplied by Bradbury Wilkinson (sometimes referred to as “Contractors paper”).
- **PCP:** Phosphor Coated Paper. This is a chalk coated paper incorporating a phosphor activator during manufacture. It has a dull appearance, giving a weak afterglow under short-wave ultraviolet light.

PCP1 has a strong afterglow and a dull matt appearance.

PCP2 has a very shiny appearance and strong afterglow.
- **PPP:** Preprinted Phosphor Paper. Ordinary FCP paper was pre-printed with allover phosphor and then used to print stamps in the usual way. Short-lived, only used in October 1979.

I would recommend buying, from a reputable Machin-specialist stamp dealer, a sample stamp of each of these paper types to use for comparison purposes.

24. Screened values/borders

Nearly 40 Machin stamps can be found where the ‘white’ of the denomination is not completely white — there is a screened effect of dots throughout the value. This is certainly a bit more specialized variety but still certainly collectible. In fact, if you have hundreds, or thousands, of the ‘same’ stamp, finding a few of these screened values amongst the pile can be quite rewarding.



Screened value

For reference copies, find any of these stamps — they only come with a screened value:

- 34p purple
- 34p Anniversary
- 37p Anniversary

You will certainly need a magnifying glass to determine screened values.

If you only have used stamps that you are sorting, then the next two methods, gum and security backing paper, can obviously be ignored.

25. Gum

Naturally, this sorting option is only applicable to mint stamps. Three basic types of gum on water-activated Machins have been used:

- Gum arabic
- Dextrin
- PVA

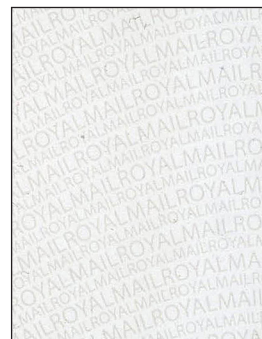
Trying to illustrate “gum” is rather difficult here. As with the [23. Paper] sorting criteria, I would recommend buying an example of each to use as reference copies.

26. Security Backing Paper

Naturally, this sorting option is only applicable to mint self-adhesive stamps. Some late-issue 2015-type security Machins, printed by Walsall, began including a light-grey ‘wavy’ text printed on top of the backing paper. It is visible between the mint stamps, and, when the stamp is removed from the pane/booklet, the full text on the backing paper becomes apparent.

The stamp itself does not show any of this text. Thus, once the stamp is removed from the pane/booklet, this sorting method is no longer applicable (unless that issue only comes the one way, but the backing paper would no longer be available anyway).

Two other types have since appeared, where certain rows of text are inverted.



Security Backing Paper

27. Other sort criteria (more specialized)

The very specialist Machin collector (dare we say *Machin Nut* ?) will also use additional printing characteristics to further differentiate certain Machin stamps:

- **booklet position:** based on the idea of cut vs. torn, the position of a stamp within a booklet can, in many cases, be determined. Each position is essentially a different variety.
- **different elliptical perforations:** two types exist, but these are very tricky to identify and usually require at least a pair of stamps to do so.
- **17-pin perforations:** in 1984, a broken pin on one of the three Jumelle APS perforator drums was repaired by hand. Inadvertently, an extra pin was drilled resulting in 17 complete holes instead of the normal 16 appearing between columns 1 and 2. The variety has been found on 16 different Machin values.
- **perforation style:** Various different perforating equipment has been used over the years to perforate Machins. On a selected number of stamps, two distinct perforating styles can be identified, with the aid of a magnifying glass.
- **phosphor screen:** this can be either 150 or 250.
- **direction of printing:** the direction that the paper was fed. Some stamps can be identified by being fed sideways to the left, sideways to the right, up or down.



17-pin variety (between the pair of stamps)

The latter three criteria are, by far, the most difficult characteristics to determine on Machin stamps. Unless someone tells me what variety I have, I ignore these.

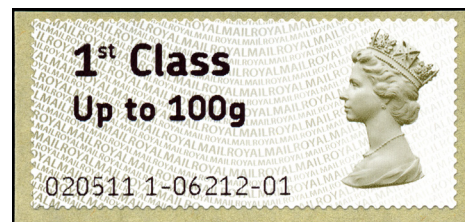
28. Other collecting areas

Can't get enough of Machins? Here are a couple of other collecting areas that are extremely popular:

- perfins (stamps with PERForated INItialS)
- complete booklets and/or panes
- coil strips
- Post and Go labels
- postal rates and history, including cancellations, rate markings, various usages, etc.
- errors (imperforate, missing phosphor, phosphor shifts)
- counterfeits
- the "Machin head" used on stamps from other countries

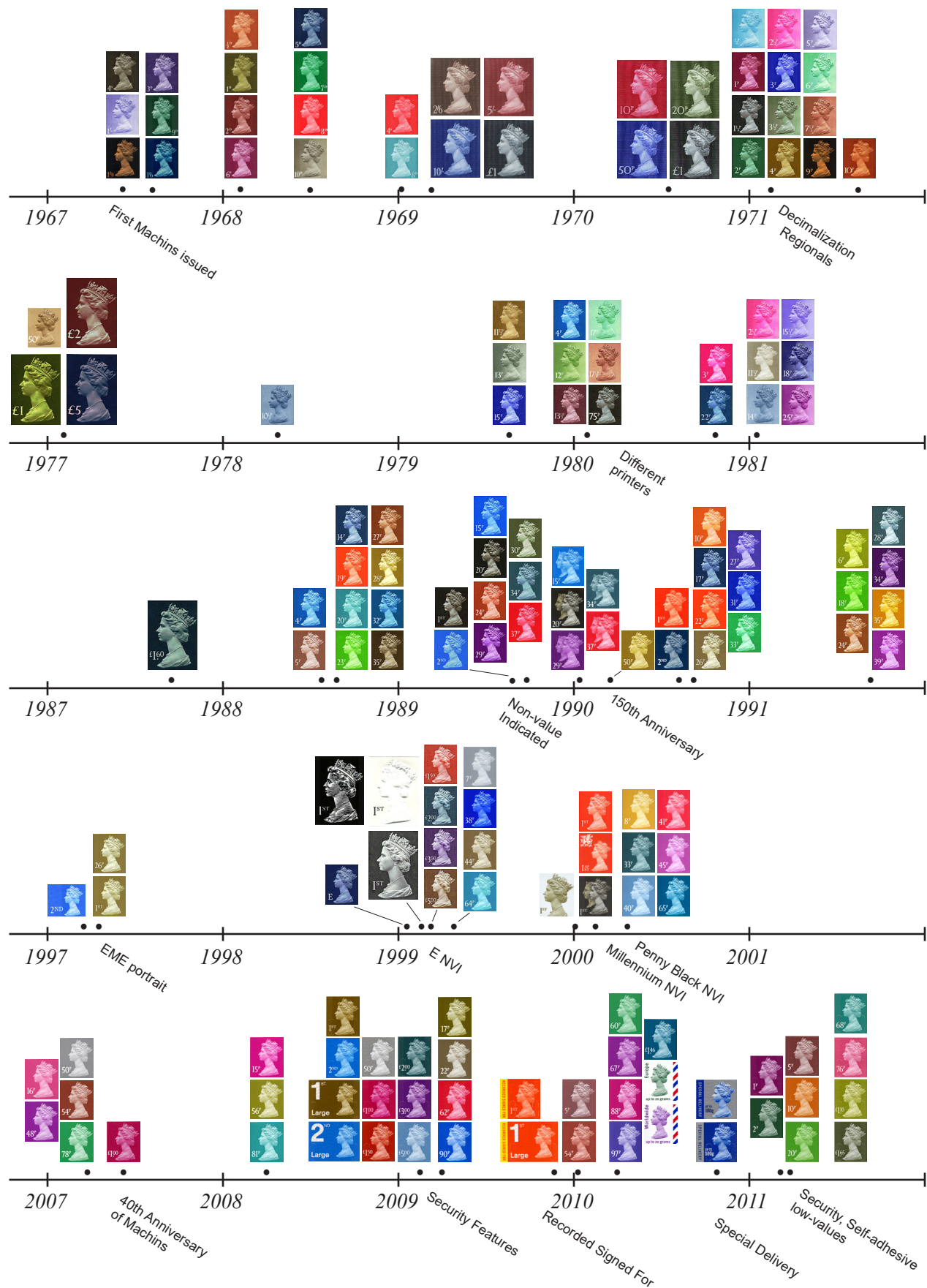


W&S perfin
(seen from front and back of stamp)

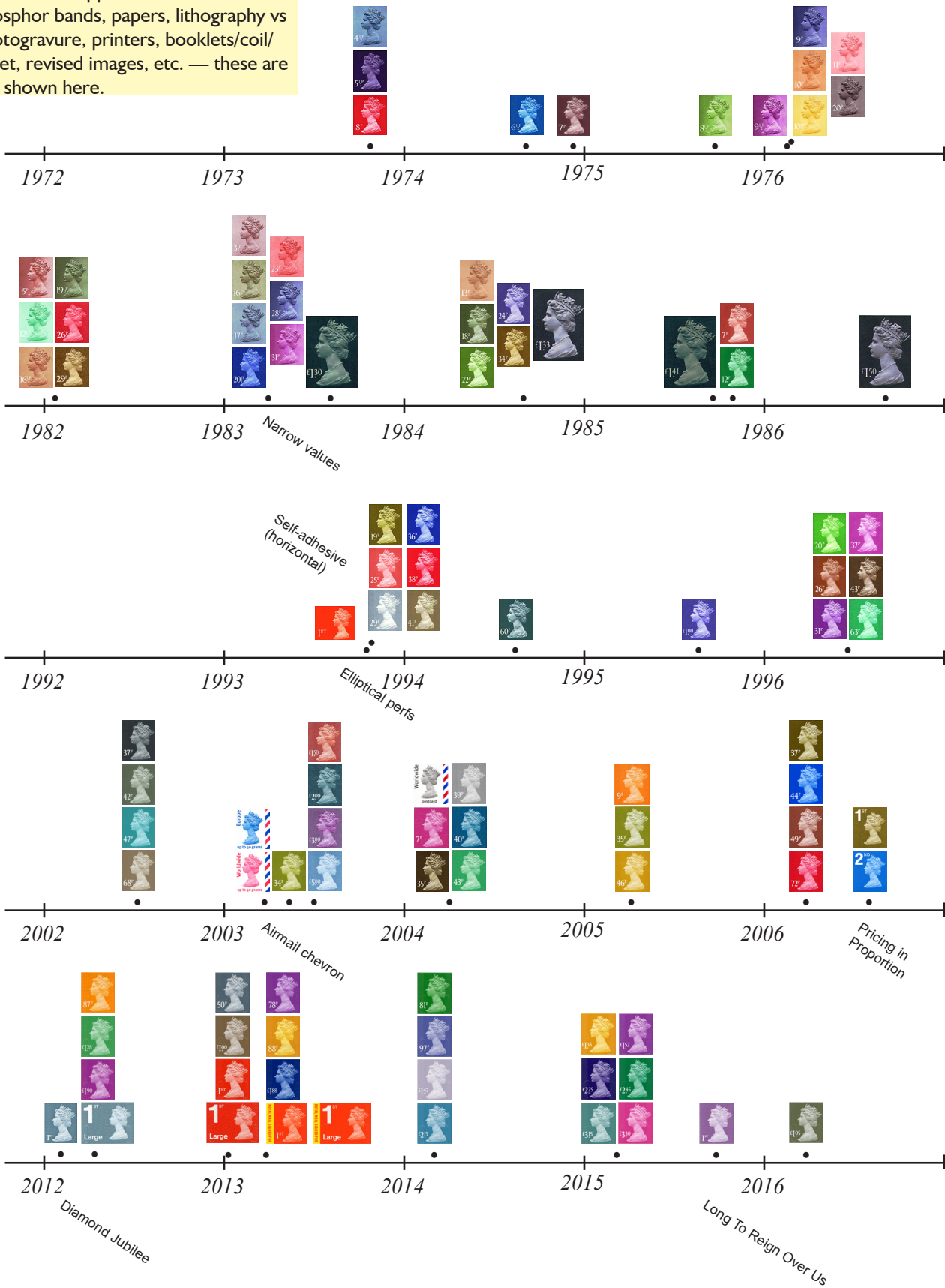


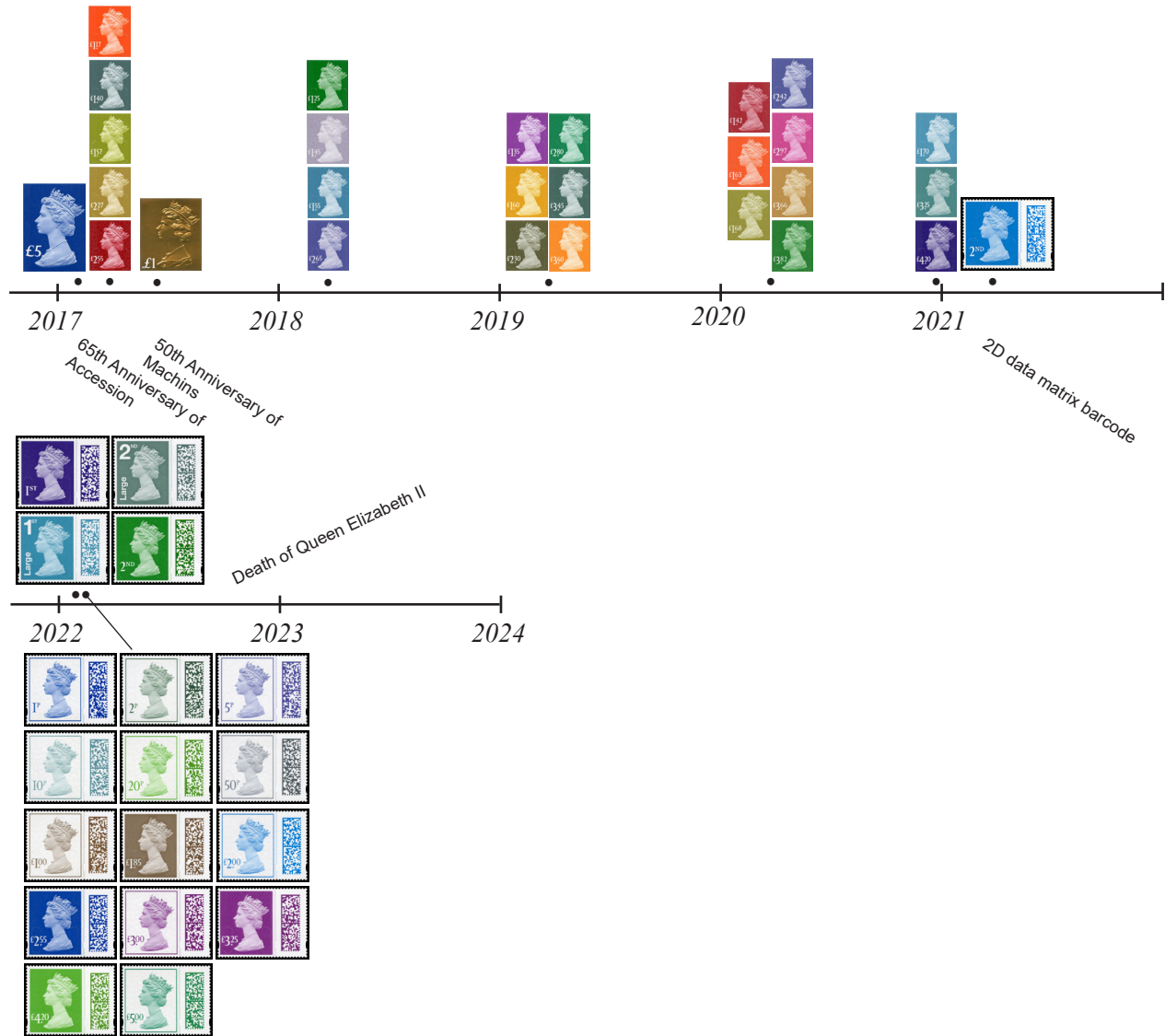
Post and Go label

Machin Timeline



This timeline shows when the new designs/values were released. Most of these also appeared with different phosphor bands, papers, lithography vs photogravure, printers, booklets/coil/sheet, revised images, etc. — these are not shown here.

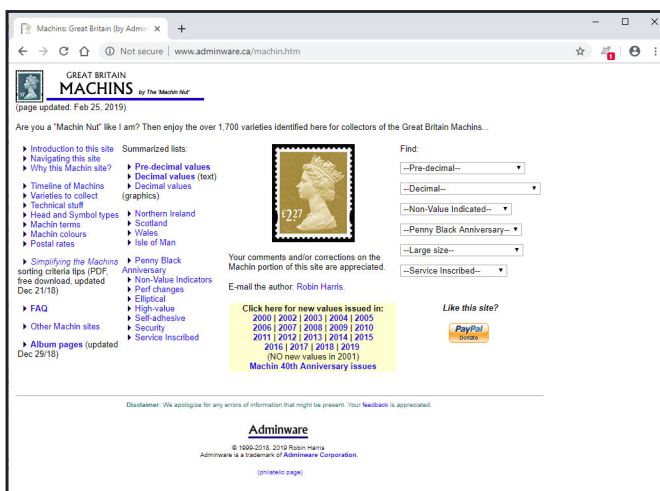




Other resources

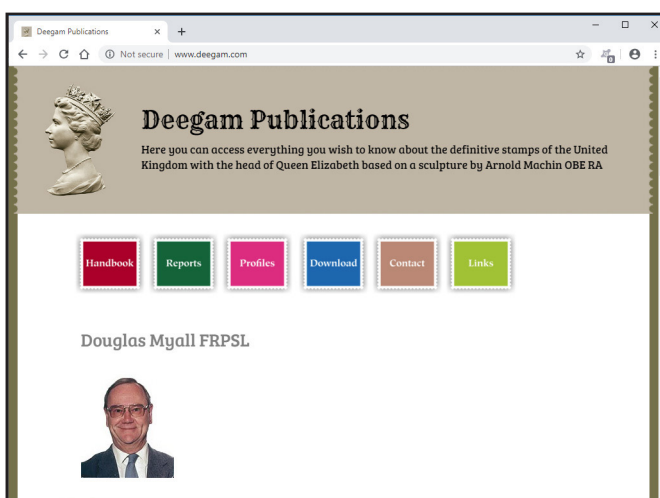
My own website provides a fairly complete listing of Machin stamps.

Much of the material found in this document was gleaned from the website.



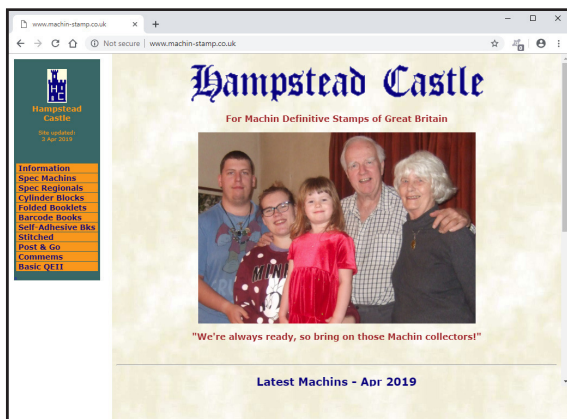
Adminware Corporation: adminware.ca

The Deegam Handbook (now available on DVD) is by far the most complete (i.e. specialized) and up-to-date resource for Machin stamps.

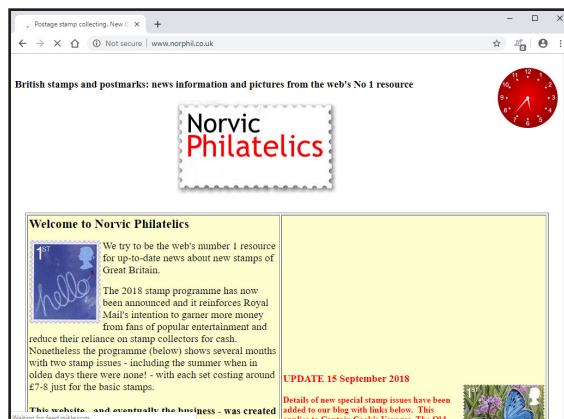


Deegam publications: www.deegam.com

Two Machin-specialist stamp dealers that I would recommend are:



Hampstead Castle
<http://www.machin-stamp.co.uk/>



Norvic Philatelics
<http://www.norphil.co.uk/>

Album pages (for single stamps)

One of the reasons that I created a Machin website was to force myself to organize our Machins. The end result is a series of album pages catered to different levels of collecting. A checklist of features found in the four sets of album pages appears below.

This is just one way to organize your Machin collection. I am not saying that is the best way for you; it is just one method and it works for me. Many collectors will develop their own pages. Many may use stock books, which allows for the easy movement of stamps as new varieties are issued. Here is a brief summary of the features; visit my website for full details: <https://adminware.ca/machin>

Basic album

The 'Basic' album features one example of every major value and colour Machin stamp. This includes over 495 different stamps. A collection of this type requires absolutely no tool of any kind (such as a perforation gauge, magnifying glass, or ultraviolet lamp). Each stamp can be easily identified at a quick glance.

Novice album

The 'Novice' album includes all of the major varieties that a collector of used stamps can identify with some basic stamp collecting tools (perforation gauge, magnifying glass, and ultraviolet lamp).

Two different sets of album pages are included.

Intermediate album

The 'Intermediate' album adds a few more varieties that can generally be easy to 'see': source of the stamp (i.e. coil, booklet pane, or sheet), Head and country symbol types, screened values, back prints.

In addition, you can download a "no picture" set of these pages, at no extra charge (i.e. included).

Specialized album

The 'Specialized' album is for the collector who enjoys a challenge. It features one example of nearly every regularly issued variety (errors, complete booklets and booklet panes excluded).



Album Feature Comparison				
	Free!	\$30	\$45	\$60
Feature	Basic	Novice	Intermediate	Specialized
Country	✓	✓	✓	✓
Currency	✓	✓	✓	✓
Anniversary	✓	✓	✓	✓
Denomination	✓	✓	✓	✓
Value size (narrow vs wide)	✓	✓	✓	✓
Value font	✓	✓	✓	✓
Colour	✓	✓	✓	✓
Elliptical perforations	✓	✓	✓	✓
Service inscribed	✓	✓	✓	✓
Security features	✓	✓	✓	✓
Revised portrait (EME image)		✓	✓	✓
Perforation		✓	✓	✓
Self-adhesive		✓	✓	✓
Printing method		✓	✓	✓
Phosphor bands (and ACP, PCP, PPP)		✓	✓	✓
Symbol type			✓	✓
Head type			✓	✓
Source (coil, booklet, sheet)			✓	✓
Value type			✓	✓
Value setting			✓	✓
Screened values			✓	✓
Back prints			✓	✓
Paper (OCP, FCP, PCP1 vs 2)				✓
JET phosphor				✓
Phosphor width (8mm vs 9.5mm, etc.)				✓
Booklet position				✓
Gum				✓
Perforation style (APS, Kampf)				
Phosphor screen (150, 250)				

MACHINS

The first Machin stamps were issued June 5, 1967. Since then, dozens and dozens of different values have been released and many colour changes have occurred to provide the stamp collector with arguably the largest definitive series ever produced (and still going strong!).

Machins are named after Arnold Machin (pronounced MAY-chin), a sculptor who designed the portrait of the Queen used on these Great Britain stamps. Machin passed away March 9, 1999 at the age of 87. He was honoured on a stamp in 2007, the fortieth anniversary of the release of the first Machin stamp.



There are many reasons why there are so many different Machins to collect: fifty years of new denominations and colours; different printers have been involved; Machins have been issued in sheet, coil, and booklet form; various phosphor tagging has been used; different papers and gum have been employed, just to name a few.

This booklet helps you sort and organize your Machin stamps, by showing a simplified set of sorting criteria.

This document will be updated as needed.