

RADIOFOLDER

A

**THE MASTER
COLOUR CODE INDEX
FOR
RADIO
&
TELEVISION**

RESISTORS

CAPACITORS

TRANSFORMERS

FIELD COILS

CABLES

SPEAKERS

ETC.

BERNARDS RADIO SERIES No. 103

ONE SHILLING AND SIXPENCE

INTERNATIONAL MASTER

COLOUR CODE CHART

U.S.A. COLOUR CODE FOR

A.F. Transformers.

Anode (OP)	...	...	...	...	...	...	Blue.
H.T.+ Plain or C.T.	...	...	...	...	...	...	Red.
Anode (IP) on C.T. primaries	...	...	...	...	...	...	Brown.

(Blue may be used if polarity is unimportant).

Grid (OS)	...	...	...	...	...	...	Green.
Grid return, Plain or C.T.	...	...	...	...	...	...	Black.
Grid (IS) on C.T. secondaries	...	...	...	...	...	...	Yellow.

(Green may be used if polarity is unimportant.)

This code also applies to line-to-grid and valve-to-line transformers.

Speech Coils.

Start	...	...	Black.
Finish	...	...	Green.

Loudspeaker Field Coils.

Inner	...	Black/Red.
Outer	...	Yellow/Red.
Tap (if any)		Grey/Red.

BRITISH COLOUR CODE FOR

Output Transformers.

Primary inner ... Brown.

Primary outer ... Green.

Primary C.T. ... Red.

Secondary inner ... Maroon.

Secondary outer ... White.

Loudspeaker Field Coils.

Inner ... Black.

Outer ... Yellow.

I.F. Transformers.

Anode ... Blue.

Grid or Diode ... Green.

H.T.+ ... Red.

Earth or A.V.C. return Black.

If the secondary is tapped, the C.T. is Black and the 2nd Grid or Diode is Green/Black.

U.S.A. Gramophone Motors.

White Dot.

Green Dot.

No Mark.

25~

50~

60~

U.S.A. COLOUR CODE FOR BATTERY CORDS.

<i>Function.</i>	<i>Colour.</i>	<i>Function.</i>	<i>Colour.</i>
H.T.+ Max.	... Blue.	L.T.—	... Black.
H.T.+ 2	... White.	G.B.+	... Brown.
H.T.—	... Yellow.	G.B.— Max.	... Green.
L.T.+	... Red.	G.B.— 2	... Orange.

BRITISH COLOUR CODE FOR BATTERY CORDS.

<i>Function.</i>	<i>Colour.</i>	<i>Function.</i>	<i>Colour.</i>
H.T.+ Max.	... Red.	G.B.+	... Green.
H.T.+ 2	... Maroon/Red.	G.B.— Max.	Black/Green tracer.
H.T.+ 3	... Maroon.	G.B.— 2	... Green/Black.
H.T.—	Black/Red tracer.	L.S.	... Black/Brown tracer.
L.T.+	... Yellow.	L.S.	Brown (high potential).
L.T.—	Black/Yellow tracer.		

BRITISH COLOUR CODE FOR POWER TRANSFORMERS.

<i>Primary.</i>	<i>Secondaries.</i>
Common	H.T. ... Red.
10v.	C.T. ... Red/Yellow.
210v.	Rectifier Heater Green.
230v.	C.T. ... Green/Yellow.
250v.	Heaters (1) ... Brown.
Electrostatic screen	C.T. ... Brown/Yellow.
} Bare wire.	Heaters (2) ... Blue.
	C.T. ... Blue/Yellow.

G.E.C. WIRING COLOUR CODE.

High-potential connections to aerial and first section of band-pass circuits, also non-earth side of special coils	... ..	White.
Other high potential signal circuits, including grid circuits	... ..	Green.
Screen Grids	... ..	Blue.
Cathodes	... ..	Pink
Anodes	... ..	Orange.
Earth	... ..	Black.
H.T.— when not earthed	... ..	Grey.
Smoothed H.T.+	... ..	Red.
Unsmoothed H.T.+	... ..	Red/White.
A.V.C. and grid de-coupling	... ..	Green/White.
Heaters	... ..	}
	
L.T.+	... ..	Black/White.
	... ..	Black/Red.

BRITISH AND U.S.A. COLOUR CODES FOR

Fuses.

Value.	Colour.	Value.	Colour.
.060 Amp. ...	Black.	1 Amp. ...	Dark Blue.
.100 Amp. ...	Grey.	1.5 Amp. ...	Light Blue.
.150 Amp. ...	Red.	2 Amp. ...	Purple.
.250 Amp. ...	Brown.	3 Amp. ...	White.
.500 Amp. ...	Yellow.	5 Amp. ...	Black and White.
.750 Amp. ...	Green.		

Capacitor Leads.

Value.	Colour.	Value.	Colour.
Centre Lead of Voltage doubler Condensers	White.	Highest Capacity +	Red.
Principal Negative Lead	Black.	2nd " "	+ Yellow.
2nd Negative ...	Brown.	3rd " "	+ Green.
3rd Negative ...	Grey.	4th " "	+ Blue.
		5th " "	+ Violet.

When 2 capacities are of the same value, the one of the higher voltage rating has the higher colour in the table.

Series connections are marked ... \pm
 Common Positive Junctions are marked +
 Unconnected sections are marked ... &
 Common Negative Junctions are marked —

Examples:—

6 ± 6	A series voltage doubler connection.
$2 + 2$	Two $2\mu\text{F}$ condensers with common positive lead.
$4 \& 4$	Two isolated $4\mu\text{F}$ condensers.
$8 - 8$	Two $8\mu\text{F}$ condensers with common negative lead.

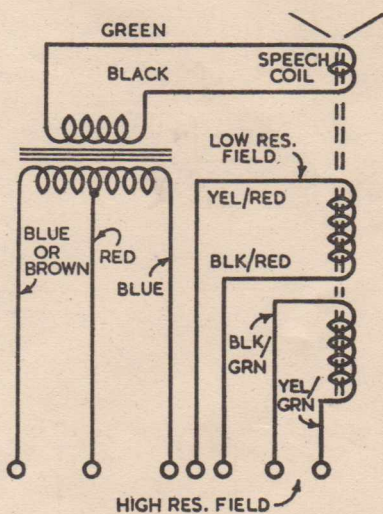
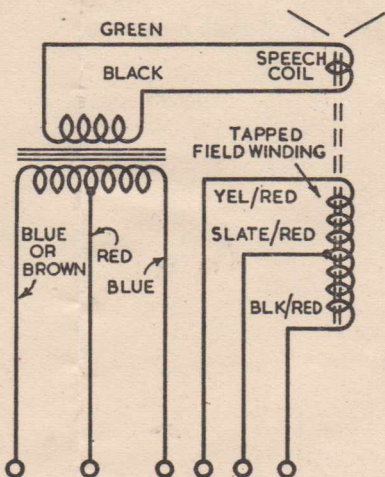
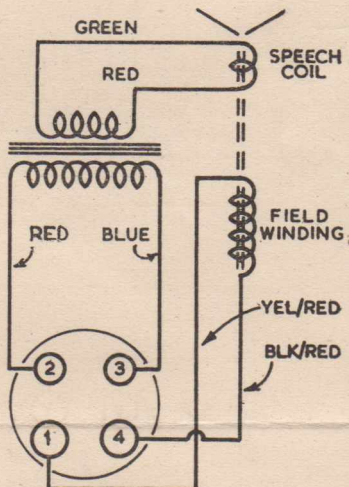
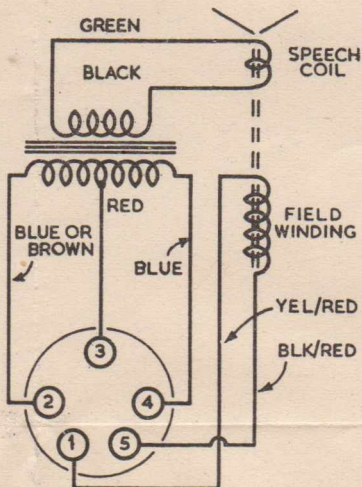
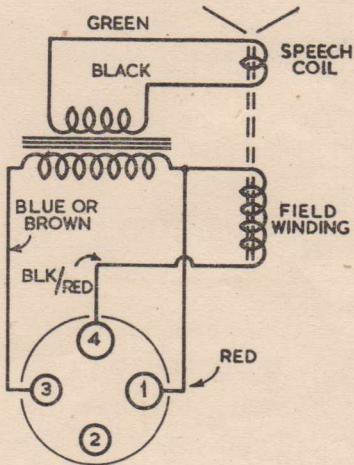
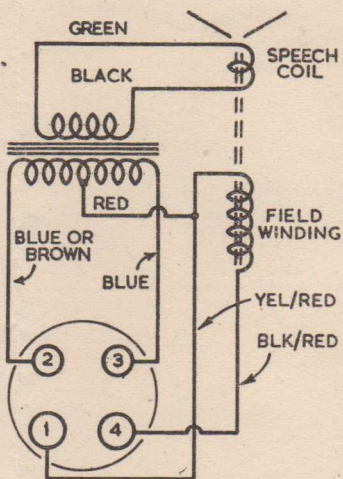
WANDER PLUGS.

Function	Colour.	Function.	Colour.
H.T.+ Max. ...	Red.	H.T.— ...	Black.
H.T.+ 2 ...	Yellow.	G.B.+ ...	Black.
H.T.+ 3 ...	Green.	G.B.— Max. ...	Brown.
H.T.+ 4 ...	Blue.	G.B.— 2 ...	Grey.
L.T.+ ...	Pink.	G.B.— 3 ...	White.
L.T.— ...	Black.		

Any additional lead is Violet, and any centre tap is White.

USA COLOUR CODES FOR LOUDSPEAKER LEADS AND PLUG CONNECTORS

ALL PLUGS VIEWED FROM UNDERSIDE OF PINS



BRITISH AND RMA-JAN [USA] RESISTOR AND CAPACITOR COLOUR CODES

INSTRUCTIONS - IDENTIFY COMPONENT BY REFERENCE TO ILLUSTRATIONS IN LOWER COLUMNS, THEN USE THE TABLE IMMEDIATELY BELOW TO DETERMINE THE VALUES REPRESENTED BY THE COLOURS.

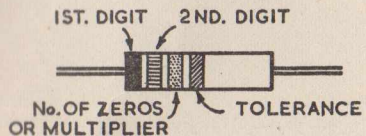
COLOUR	DIGITS OR NO OF ZEROS	RESISTORS BRITISH, RMA/JAN		CAPACITORS, MOULDED MICA, BRITISH, RMA & JAN.			CAPACITORS, MOULDED PAPER		CAPACITORS, CERAMIC, BRITISH, RMA/JAN			TEMP. COEFF. PTS./MIL./ °C.
		MULTIPLIER	TOLERANCE	MULTIPLIER	TOLERANCE	CLASS OR CHARACTERISTIC	MULTIPLIER	TOLERANCE	MULTIPLIER	TOLERANCE		
										OVER 10 μ F	10 μ F & UNDER	
BLACK	0	1		1	20%	A	1	20%	1	20%	2 μ F	0
BROWN	1	10		10		B	10		10	1%		- 30
RED	2	100		100	2%	C	100		100	2%		- 80
ORANGE	3	1000		1000	3% [RMA]	D	1000		1000	2½% [RMA]		- 150
YELLOW	4	10,000		10,000		E	10,000	5%	10,000 [RMA]			- 220
GREEN	5	100,000			5% [RMA]	F [JAN]				5%	0.5 μ F	- 330
BLUE	6	1,000,000				G [JAN]						- 470
VIOLET	7	10,000,000										- 750
GREY	8	100,000,000				I [RMA]			÷ 100		0.25 μ F	+ 30
WHITE	9	1,000,000,000				J [RMA]		10%	÷ 10	10%	1 μ F	-330+500 JAN +120-750 RMA
GOLD		÷ 10	5%		5% [JAN]		÷ 10	5%				
SILVER		÷ 100	10%		10%			10%				
NO COLOUR			20%					20%				

RESISTORS

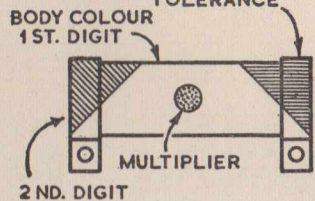
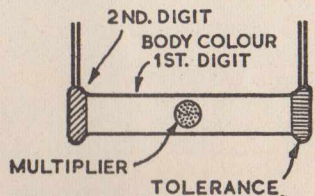
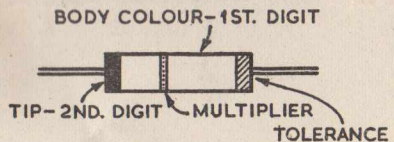
BRITISH, RMA/JAN

COLOUR CODE GIVES RESISTANCE IN OHMS

COLOUR BAND SYSTEM



BODY, TIP, DOT, OR NARROW-BAND SYSTEM



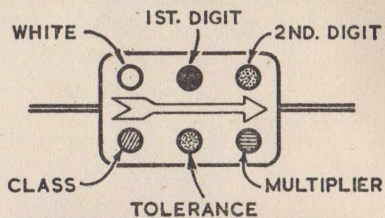
EXAMPLE: YEL/VIOLET/RED/SILVER
4700Ω ± 10%

CAPACITORS

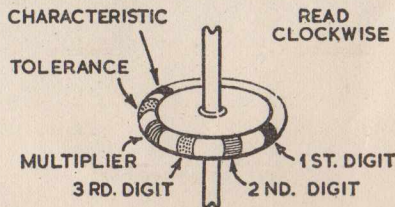
MOULDED MICA

COLOUR CODE GIVES CAPACITY IN pF

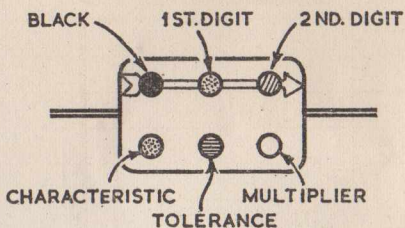
6-DOT SYSTEM



BUTTON SILVER-MICA



JAN 6-DOT SYSTEM



EXAMPLE, 6-DOT SYSTEM:
WHITE-BROWN-GREEN } 150 pF 10%
WHITE-SILVER-BROWN } CLASS J.

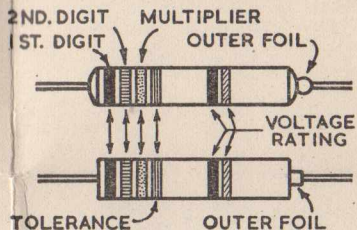
CAPACITORS

MOULDED PAPER

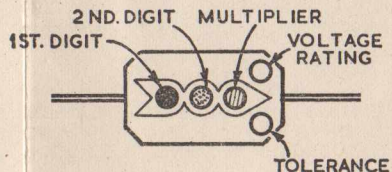
COLOUR CODE GIVES CAPACITY IN pF

VOLTAGE RATINGS IN HUNDREDS OF VOLTS. ONE COLOUR BAND FOR VOLTAGES BELOW 1000V.

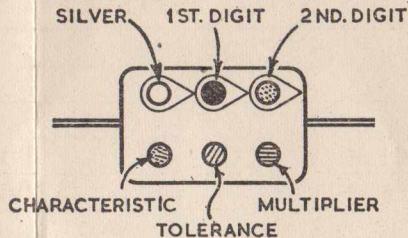
BAND SYSTEM



DOT SYSTEM



ARROW POINTS TO OUTER FOIL END



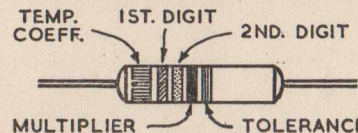
EXAMPLE, BAND SYSTEM:
RED-VIOLET-RED-YELLOW-BROWN-RED
2700pF 5% 1200 V.

CAPACITORS

CERAMIC

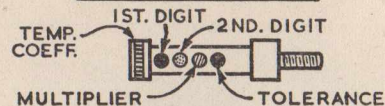
COLOUR CODE GIVES CAPACITY IN pF

MOULDED INSULATED TYPE

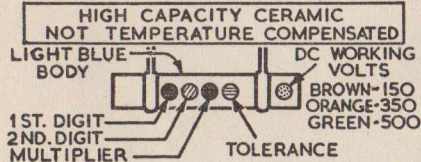
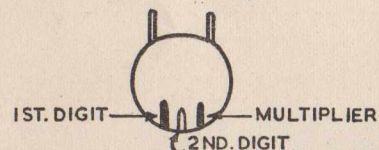
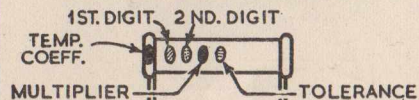


TO AVOID CONFUSION WITH A RESISTOR, NOTE THAT FIVE COLOUR BANDS ARE USED, ONE BROAD, FOUR NARROW.

STAND-OFF CERAMIC



DIPPED PHENOLIC INSULATED OR NON-INSULATED



EXAMPLE, MOULDED INSULATED TYPE:
RED-BLUE-GREY-BROWN-GREEN
680pF 5% TEMP. COEFF. -80 °C

BERNARDS RADIO BOOKS

No.	RADIO CONSTRUCTORS' MANUAL	3/-
56	RADIO AERIAL HANDBOOK	2/6
57	ULTRA-SHORTWAVE HANDBOOK	2/6
58	RADIO HINTS MANUAL	2/6
60	RADIO REPAIRS MANUAL	2/6
61	AMATEUR TRANSMITTERS' CONSTRUCTION MANUAL ...	2/6
62	CAR AND PORTABLE RADIO CONSTRUCTORS' MANUAL ...	2/6
63	RADIO CALCULATIONS MANUAL	3/6
64	SOUND EQUIPMENT MANUAL	2/6
65	RADIO DESIGNS MANUAL	2/6
66	COMMUNICATIONS RECEIVERS' MANUAL	2/6
68	FREQUENCY MODULATION RECEIVERS' MANUAL	2/6
69	RADIO INDUCTANCE MANUAL	2/6
70	LOUDSPEAKER MANUAL	2/6
71	MODERN BATTERY RECEIVERS' MANUAL	2/6
73	RADIO TEST EQUIPMENT MANUAL	2/6
76	RADIO ANTI-INTERFERENCE MANUAL	2/6
77	WALKIE-TALKIE CONSTRUCTION MANUAL	2/6
78	RADIO AND TELEVISION LABORATORY MANUAL	2/6
80	TELEVISION SERVICING MANUAL	4/6
81	USING EX-SERVICE RADIO APPARATUS	2/6
82	AC/DC RECEIVER CONSTRUCTION MANUAL	2/6
83	RADIO INSTRUMENTS AND THEIR CONSTRUCTION	2/6
84	INTERNATIONAL WORLD RADIO STATION LIST	1/6
85	MINIATURE RADIO EQUIPMENT CONSTRUCTION MANUAL ...	3/6
86	MIDGET RADIO CONSTRUCTION	3/6
90	WIRELESS AMPLIFIER MANUAL No. 2	3/-
92	INTRODUCTION TO HAM RADIO	3/6
93	POWER PACK MANUAL	4/6
94	PRACTICAL CIRCUITS MANUAL	3/6
95	RADIO DATA BOOK	1/6
96	CRYSTAL SET CONSTRUCTION	1/-
97	PRACTICAL RADIO FOR BEGINNERS, BOOK I	3/-
98	MODERN VALVE COMPARISON MANUAL	3/-
99	ONE VALVE RECEIVERS	1/6
100	A COMPREHENSIVE RADIO VALVE GUIDE	5/-
101	TWO VALVE RECEIVERS	1/6
	THE ELECTRONIC PHOTOGRAPHIC SPEEDLAMP: HOW TO MAKE IT AND HOW TO USE IT	3/6
	ENGINEERS' REFERENCE TABLES	1/6
	A MAGNETIC TAPE RECORDER: PRINCIPLES, DESIGN AND CONSTRUCTION	3/6
	"TECHNI-GEN" CONSTRUCTORS' ENVELOPES. Nos. 1, 2, 4, 5, 6 & 7. 1. A 3-valve plus rectifier AC/DC Receiver (200-577 M. only). 2. An "Economy" 4-valve plus rectifier AC/DC Super-het. (200- 577 M. only). 4. An AC/DC "Quality" Receiver (medium and long waves). 5. A 20-watt "Quality" Amplifier. 6. A portable AC/DC P.A. Amplifier. 7. A de-luxe Tuning Unit for the 20-watt "Quality" amplifier.	2/- each
	HAM NOTES SERIES	1/-
	1. Comprehensive Crystal Calibrator. 2. The "R-9er." 3. Single Sideband Reception. 4. Low Power Transmitter.	each