

SECTION G — PHYSICS

G09 EDUCATING; CRYPTOGRAPHY; DISPLAY; ADVERTISING; SEALS

G09B EDUCATIONAL OR DEMONSTRATION APPLIANCES; APPLIANCES FOR TEACHING, OR COMMUNICATING WITH, THE BLIND, DEAF OR MUTE; MODELS; PLANETARIA; GLOBES; MAPS; DIAGRAMS

Note(s)

1. This subclass covers :
 - simulators regarded as teaching or training devices, which is the case if they give perceptible sensations having a likeness to the sensations a student would experience in reality in response to actions taken by him;
 - models of buildings, installations, or the like.
2. This subclass does not cover :
 - simulators which merely demonstrate or illustrate the function of an apparatus or of a system by means involving computing, and therefore cannot be regarded as teaching or training devices. Such simulators are covered by class G06, if no provision exists elsewhere;
 - components of simulators, if identical with real devices or machines, which are covered by the relevant subclasses for these devices or machines and not by class G09.

Subclass index

TEACHING EQUIPMENT IN GENERAL

General principle of operation

manual or mechanical.....1/00, 3/00

electrical.....5/00, 7/00

operating by question and answer.....3/00, 7/00

Simulators.....9/00

TEACHING EQUIPMENT FOR SPECIFIC PURPOSES

For writing, shorthand, drawing, painting; for typing.....11/00, 13/00

For music; for reading.....15/00, 17/00

Models for scientific or technical training.....23/00, 25/00

Planetaria, globes; maps, diagrams.....27/00, 29/00

Other teaching equipment.....19/00

TEACHING, AND COMMUNICATING WITH, THE BLIND OR DEAF.....21/00

1/00	Manually- or mechanically-operated educational appliances using elements forming or bearing symbols, signs, pictures, or the like which are arranged or adapted to be arranged in one or more particular ways	1/20	• • • • and bearing the symbols on a surface parallel to the axis of rotation
		1/22	• • • • and bearing the symbols on a surface perpendicular to the axis of rotation
1/02	• and having a support carrying or adapted to carry the elements	1/24	• • • the elements being in flexible-strip form, e.g. endless bands
1/04	• • the elements each bearing a single symbol or a single combination of symbols	1/26	• • • the elements being arranged in fan form
		1/28	• • • the elements being slidable
1/06	• • • and being attachable to, or mounted on, the support	1/30	• • wherein the elements are adapted to be arranged in co-operation with the support to form symbols
1/08	• • • • by means of magnets	1/32	• comprising elements to be used without a special support
1/10	• • • • by means of pins and holes	1/34	• • the elements to be placed loosely in adjacent relationship
1/12	• • • • by means of ring-like securing elements	1/36	• • the elements being connectible by corresponding projections and recesses
1/14	• • • • the elements being slidably mounted on the support	1/38	• • the elements being connectible magnetically
1/16	• • the elements each bearing a plurality of different symbols, signs, or combinations of symbols and signs, only one symbol, sign, or combination thereof, of each element to be used at a time	1/40	• • to form symbols or signs by appropriate arrangement
1/18	• • • the elements being rotatable	3/00	Manually- or mechanically-operated teaching appliances working with questions and answers

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- 3/02 • of the type wherein the student is expected to construct an answer to the question which is presented or wherein the machine gives an answer to the question presented by the student
- 3/04 • • of chart form
- 3/06 • of the multiple-choice answer type, i.e. where a given question is provided with a series of answers and a choice has to be made
- 3/08 • • of chart form
- 3/10 • • wherein one set of answers is common to a plurality of questions
- 3/12 • • • of chart form
- 5/00 Electrically-operated educational appliances [2]**
- Note(s)**
Group G09B 5/08 takes precedence over groups G09B 5/02-G09B 5/06.
- 5/02 • with visual presentation of the material to be studied, e.g. using film strip
- 5/04 • with audible presentation of the material to be studied
- 5/06 • with both visual and audible presentation of the material to be studied
- 5/08 • providing for individual presentation of information to a plurality of student stations [2]
- 5/10 • • all student stations being capable of presenting the same information simultaneously (G09B 5/14 takes precedence) [2]
- 5/12 • • different stations being capable of presenting different information simultaneously (G09B 5/14 takes precedence) [2]
- 5/14 • • with provision for individual teacher-student communication [2]
- 7/00 Electrically-operated teaching apparatus or devices working with questions and answers**
- 7/02 • of the type wherein the student is expected to construct an answer to the question which is presented or wherein the machine gives an answer to the question presented by the student
- 7/04 • • characterised by modifying the teaching programme in response to a wrong answer, e.g. repeating the question, supplying a further explanation
- 7/06 • of the multiple-choice answer type, i.e. where a given question is provided with a series of answers and a choice has to be made from the answers
- 7/07 • • providing for individual presentation of questions to a plurality of student stations [2]
- 7/073 • • • all student stations being capable of presenting the same questions simultaneously [2]
- 7/077 • • • different stations being capable of presenting different questions simultaneously [2]
- 7/08 • • characterised by modifying the teaching programme in response to a wrong answer, e.g. repeating the question, supplying further information
- 7/10 • • wherein a set of answers is common to a plurality of questions
- 7/12 • • • characterised by modifying the teaching programme in response to a wrong answer, e.g. repeating the question, supplying further information
- 9/00 Simulators for teaching or training purposes**
- 9/02 • for teaching control of vehicles or other craft
- 9/04 • • for teaching control of land vehicles
- 9/042 • • • providing simulation in a real vehicle (G09B 9/052, G09B 9/058 take precedence) [5]
- 9/048 • • • a model being viewed and manoeuvred from a remote point (G09B 9/052, G09B 9/058 take precedence) [5]
- 9/05 • • • the view from a vehicle being simulated (G09B 9/052, G09B 9/058 take precedence) [5]
- 9/052 • • • characterised by provision for recording or measuring trainee's performance [5]
- 9/058 • • • for teaching control of cycles or motorcycles [5]
- 9/06 • • for teaching control of ships, boats, or other waterborne vehicles [2]
- 9/08 • • for teaching control of aircraft, e.g. Link trainer
- 9/10 • • • with simulated flight- or engine-generated force being applied to aircraft occupant (G09B 9/28 takes precedence) [5]
- 9/12 • • • Motion systems for aircraft simulators [5]
- 9/14 • • • • controlled by fluid actuated piston or cylinder ram [5]
- 9/16 • • • Ambient or aircraft conditions simulated or indicated by instrument or alarm [5]
- 9/18 • • • • Condition of engine or fuel supply [5]
- 9/20 • • • • Simulation or indication of aircraft attitude [5]
- 9/22 • • • including aircraft sound simulation [5]
- 9/24 • • • including display or recording of simulated flight path [5]
- 9/26 • • • Simulation of radio-navigation [5]
- 9/28 • • • Simulation of stick forces or the like [5]
- 9/30 • • • Simulation of view from aircraft [5]
- 9/32 • • • • by projected image (G09B 9/36 takes precedence) [5]
- 9/34 • • • • by cathode-ray screen display (G09B 9/36 takes precedence) [5]
- 9/36 • • • • Simulation of night or reduced visibility flight [5]
- 9/38 • • • • • Simulation of runway outlining or approach lights [5]
- 9/40 • • • Simulation of airborne radar [5]
- 9/42 • • • Aircraft, aircraft simulator, or means connected thereto, travelling on the ground or water during simulated flight training [5]
- 9/44 • • • providing simulation in a real aircraft flying through the atmosphere without restriction of its path [5]
- 9/46 • • • the aircraft being a helicopter [5]
- Note(s)**
When classifying in group G09B 9/46, classification is also made in other appropriate subgroups of group G09B 9/08, if of interest.
- 9/48 • • • a model being viewed and manoeuvred from a remote point [5]
- 9/50 • • • Automatically directing the course of the aircraft [5]
- 9/52 • • for teaching control of an outer space vehicle [5]
- 9/54 • Simulation of radar (G09B 9/40 takes precedence) [5]
- 9/56 • Simulation of sonar [5]
- 11/00 Teaching hand-writing, shorthand, drawing, or painting**
- 11/02 • Finger, hand, or arm supporting devices
- 11/04 • Guide sheets or plates; Tracing charts
- 11/06 • Devices involving the use of transparent or translucent tracing material, e.g. copy books
- 11/08 • Teaching shorthand

11/10	• Teaching painting	23/04	• • for geometry, trigonometry, projection, or perspective (for surveying G09B 25/06)
13/00	Teaching typing	23/06	• for physics
13/02	• Dummy practice keyboard apparatus	23/08	• • for statics or dynamics
13/04	• Devices used in association with a real typewriter, teleprinter, or the like	23/10	• • • of solid bodies
15/00	Teaching music	23/12	• • • of liquids or gases
15/02	• Boards or like means for providing an indication of notes	23/14	• • for acoustics
15/04	• • with sound-emitters	23/16	• • for science of heat
15/06	• Devices for exercising or strengthening fingers or arms; Devices for holding fingers or arms in a proper position for playing	23/18	• • for electricity or magnetism
15/08	• Practice keyboards	23/20	• • for atomic physics or nucleonics
17/00	Teaching reading	23/22	• • for optics
17/02	• Line indicators or other guides or masks	23/24	• for chemistry
17/04	• for increasing the rate of reading; Reading rate control	23/26	• for molecular structures; for crystallography
19/00	Teaching not covered by other main groups of this subclass (teaching or practice apparatus for gun-aiming or gun-laying F41G 3/26)	23/28	• for medicine
19/02	• Counting; Calculating	23/30	• • Anatomical models (dental articulators A61C 11/00)
19/04	• Speaking (with audible presentation of the material to be studied G09B 5/04)	23/32	• • • with moving parts
19/06	• Foreign languages (with audible presentation of the material to be studied G09B 5/04)	23/34	• • • with removable parts
19/08	• • Printed or written appliances, e.g. textbooks, bilingual letter assemblies, charts	23/36	• for zoology
19/10	• Modelling	23/38	• for botany
19/12	• Clock-reading	23/40	• for geology
19/14	• Traffic procedures, e.g. traffic regulations	25/00	Models for purposes not provided for in group G09B 23/00, e.g. full-sized devices for demonstration purposes (model vehicles, tracks therefor, models in the nature of toys A63H)
19/16	• Control of vehicles or other craft	25/02	• of industrial processes; of machinery
19/18	• Book-keeping or economics	25/04	• of buildings
19/20	• Needlework	25/06	• for surveying; for geography, e.g. relief models (globes G09B 27/00; maps G09B 29/00)
19/22	• Games, e.g. card games	25/08	• of scenic effects, e.g. trees, rocks, water surfaces (for stage purposes A63J 1/00)
19/24	• Use of tools	27/00	Planetaria; Globes
19/26	• Dot-and-dash telegraph codes [2]	27/02	• Telluriums; Orreries
21/00	Teaching, or communicating with, the blind, deaf or mute (audible presentation of material to be studied G09B 5/04) [2, 4]	27/04	• Celestial maps
21/02	• Devices for Braille writing	27/06	• Celestial globes
21/04	• Devices for conversing with the deaf-blind	27/08	• Globes (celestial globes G09B 27/06)
21/06	• Devices for teaching lip-reading	29/00	Maps (celestial maps G09B 27/04); Plans; Charts; Diagrams, e.g. route diagrams
23/00	Models for scientific, medical, or mathematical purposes, e.g. full-sized device for demonstration purposes (in the nature of toys A63H)	29/02	• sectional
23/02	• for mathematics	29/04	• • the sections being arranged in the form of a foldable sheet or sheets
G09C	CIPHERING OR DECIPHERING APPARATUS FOR CRYPTOGRAPHIC OR OTHER PURPOSES INVOLVING THE NEED FOR SECRECY	29/06	• of belt form, e.g. endless belt
1/00	Apparatus or methods whereby a given sequence of signs, e.g. an intelligible text, is transformed into an unintelligible sequence of signs by transposing the signs or groups of signs or by replacing them by others according to a predetermined system (cryptographic typewriters G09C 3/00)	29/08	• Hanging maps or the like
1/02	• by using a ciphering code in chart form	29/10	• Map spot or co-ordinate position indicators; Map-reading aids
		29/12	• Relief maps
		29/14	• Local-time charts
		1/04	• with sign carriers or indicators moved relative to one another to positions determined by a permutation code or key, so as to indicate the appropriate corresponding clear or ciphered text
		1/06	• wherein elements corresponding to the signs making up the clear text are operatively connected with elements corresponding to the signs making up the ciphered text, the connections, during operation of the apparatus, being automatically and continuously permuted by a coding or key member

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- 1/08 • • the connections being mechanical
- 1/10 • • the connections being electrical
- 1/12 • • • comprising contact-bearing permutation discs
- 1/14 • • involving removable or interchangeable coding numbers, e.g. master tapes, punched cards
- 3/00 Typewriters for ciphering or deciphering cryptographic text**
- 3/02 • with auxiliary keys or keyboards acting on the original keys or keyboards
- 3/04 • wherein the operative connections between the keys and the type-bars are automatically and continuously permuted, during operation, by a coding or key member
- 3/06 • • the connections being mechanical
- 3/08 • • the connections being electrical
- 3/10 • • involving removable or interchangeable coding members, e.g. master tapes, punched cards
- 5/00 Ciphering or deciphering apparatus or methods not provided for in other groups of this subclass, e.g. involving the concealment or deformation of graphic data such as designs, written or printed messages**

G09D RAILWAY OR LIKE TIME OR FARE TABLES; PERPETUAL CALENDARS

- 1/00 Railway or like time or fare tables; Indicating or reading aids therefor** (incorporating maps or route diagrams, e.g. railway routing charts G09B 29/00)
- 3/00 Perpetual calendars** (printed calendar blocks B42D 5/04; clockwork-driven perpetual calendars G04B 19/24)
- 3/02 • with interchangeable members bearing the indicia
- 3/04 • wherein members bearing the indicia are movably mounted in the calendar
- 3/06 • • with rotatable members
- 3/08 • • • of disc form
- 3/10 • • with members in band form
- 3/12 • electrically operated

G09F DISPLAYING; ADVERTISING; SIGNS; LABELS OR NAME-PLATES; SEALS

Note(s)

1. In this subclass, the following term is used with the meaning indicated:
 - "sign" designates a mark or indication serving to make something recognisable, the information presented being non-varying, even if it is flashing; by way of example it covers, therefore, advertising hoardings, or luminous, or light reflecting, safety arrangements.
2. Attention is drawn to the Notes following the titles of class B81 and subclass B81B relating to "micro-structural devices" and "micro-structural systems".

Subclass index

INFORMATION AND ADVERTISING
 Displaying samples.....5/00
 With fixed information:
 show-cards; labels or tags; signs, plates, characters..... 1/00, 3/00, 7/00
 With variable information:
 by combination of elements; by movement of complete information.....9/00, 11/00
 Illuminated signs; luminous advertising..... 13/00
 Supports used for bill-posting and advertising: panels; banners; goods; others.....15/00, 17/00, 23/00, 19/00

PROCESSES OF ADVERTISING
 Movable; audible; audio-visual; others.....21/00, 25/00, 27/00, 19/00

- 1/00 Cardboard or like show-cards of foldable or flexible material**
- 1/02 • Single substantially-flat cards
- 1/04 • Folded cards
- 1/06 • • to be erected in three dimensions (G09F 1/08 takes precedence)
- 1/08 • wholly or partly imitating the form of an object, e.g. of the article to be advertised
- 1/10 • Supports or holders for show-cards
- 1/12 • • Frames therefor
- 1/14 • • in the form of legs
- 3/00 Labels, tag tickets, or similar identification or indication means; Seals; Postage or like stamps**
- 3/02 • Forms or constructions
- 3/03 • • of security seals
- 3/04 • to be fastened or secured by the material of the label itself, e.g. by thermo-adhesion (by a separate adhesive layer G09F 3/10)
- 3/06 • • by clamping action (by separate clamps G09F 3/16)
- 3/08 • Fastening or securing by means not forming part of the material of the label itself
- 3/10 • • by an adhesive layer
- 3/12 • • by pins, staples, or the like
- 3/14 • • by strings, straps, chains, or wires
- 3/16 • • by clamps
- 3/18 • • Casings, frames, or enclosures for labels
- 3/20 • • • for adjustable, removable, or interchangeable labels

5/00	Means for displaying samples	11/10	• • Electric control therefor
5/02	• Portable sample cases	11/12	• the display elements being carried by endless belts, chains, or the like
5/04	• Cards of samples; Books of samples	11/14	• • the elements being in the form of stiff flaps, boards, cards, or the like
7/00	Signs, name or number plates, letters, numerals, or symbols; Panels or boards (show-cards G09F 1/00; indicating arrangements for variable information G09F 9/00, G09F 11/00; illuminated signs G09F 13/00; boards for notices or posters G09F 15/00)	11/15	• • the elements being flexible sheets
7/02	• Signs, plates, panels, or boards using readily-detachable elements bearing or forming symbols	11/16	• • Electric control therefor
7/04	• • the elements being secured or adapted to be secured by magnetic means	11/18	• the display elements being carried by belts, chains, or the like, other than endless
7/06	• • the elements being secured or adapted to be secured by means of pins and holes	11/20	• • the elements being in the form of stiff flaps, boards, cards, or the like
7/08	• • the elements being secured or adapted to be secured by means of grooves, rails, or slits	11/21	• • the elements being flexible sheets
7/10	• • • and slidably mounted	11/22	• • Electric control therefor
7/12	• • the elements being secured or adapted to be secured by self-adhesion, moisture, suction, slow-drying adhesive, or the like	11/23	• the advertising or display material forming part of rotating members, e.g. in the form of perforations, prints, or transparencies on a drum or disc
7/14	• • Constructional features of the symbol-bearing or -forming elements	11/235	• • Electric control therefor
7/16	• Letters, numerals, or other symbols, adapted for permanent fixing to a support	11/24	• the advertising or display material forming part of a moving band, e.g. in the form of perforations, prints, or transparencies
7/18	• Means for attaching signs, plates, panels, or boards to a supporting structure	11/26	• • of an endless band
7/20	• • for adjustably mounting	11/28	• • • Electric control therefor
7/22	• • for rotatably or swingably mounting, e.g. for boards adapted to be rotated by the wind	11/29	• • of a band other than endless
9/00	Indicating arrangements for variable information in which the information is built-up on a support by selection or combination of individual elements (in which the variable information is permanently attached to a movable support G09F 11/00)	11/295	• • • Electric control therefor
9/30	• in which the desired character or characters are formed by combining individual elements	11/30	• the display elements being fed one by one from a storage place to a display position
	Note(s) [2012.01]	11/32	• • the feeding means comprising belts or chains, e.g. endless belts or chains
	Group G09F 9/302 takes precedence over groups G09F 9/305-G09F 9/37.	11/34	• • the feeding means comprising electromagnets
9/302	• • characterised by the form or geometrical disposition of the individual elements [7]	13/00	Illuminated signs; Luminous advertising (G09F 9/00, G09F 11/00 take precedence; mobile visual advertising G09F 21/00)
9/305	• • being the ends of optical fibres (G09F 9/302 takes precedence) [7]	13/02	• Signs, boards, or panels, illuminated by artificial light sources positioned in front of the insignia
9/307	• • being incandescent filaments [3, 7]	13/04	• Signs, boards, or panels, illuminated from behind the insignia
9/313	• • being gas discharge devices [3, 7]	13/06	• • using individual cut-out symbols or cut-out silhouettes, e.g. perforated signs
9/33	• • being semiconductor devices, e.g. diodes [3, 7]	13/08	• • using both translucent and non-translucent layers
9/35	• • being liquid crystals [3, 7]	13/10	• • • using transparencies
9/37	• • being movable elements [3, 7]	13/12	• • using a transparent mirror or other light-reflecting surface transparent to transmitted light whereby a sign, symbol, picture, or other information is visible only when illuminated
9/40	• in which the desired character is selected from a number of characters arranged one beside the other, e.g. on a common carrier plate	13/14	• • Arrangements of reflectors therein
9/46	• in which the desired character is selected from a number of characters arranged one behind the other	13/16	• Signs formed of, or incorporating, reflecting elements or surfaces, e.g. warning signs having triangular or other geometrical shape
11/00	Indicating arrangements for variable information in which the complete information is permanently attached to a movable support which brings it to the display position	13/18	• Edge-illuminated signs
11/02	• the display elements being secured to rotating members, e.g. drums, spindles	13/20	• with luminescent surfaces or parts
11/04	• • the elements being secured to rotating discs	13/22	• • electroluminescent
11/06	• • the elements being stiff plates or cards (on rotating discs G09F 11/04)	13/24	• using tubes or the like filled with liquid, e.g. bubbling liquid
11/08	• • the elements being flexible sheets (on rotating discs G09F 11/04)	13/26	• Signs formed by electric discharge tubes (by selective lighting G09F 9/00)
		13/28	• Signs formed by filament-type lamps (by selective lighting G09F 9/00)
		13/30	• with moving light sources, e.g. rotating luminous tubes
		13/32	• with moving optical part or parts, e.g. mirrors
		13/34	• with light sources co-operating with movable members, e.g. with shutters to cover or uncover the light source (apparatus wherein advertising or display material is moved in a continuous or intermittent succession G09F 11/00)

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- 13/36 • • co-operating with rotating screening means
- 13/42 • with light sources activated by non-visible radiation
- 13/44 • with gas as lighting source
- 13/46 • Advertising by fireworks
- 15/00 Boards, hoardings, pillars, or like structures for notices, placards, posters, or the like**
- 15/02 • Bills, posters, or the like therefor
- 17/00 Flags; Banners; Mountings therefor**
- 19/00 Advertising or display means not otherwise provided for**
- 19/02 • incorporating moving display members
- 19/04 • • operated by the opening or closing of doors, e.g. shop door
- 19/06 • • Writing devices
- 19/08 • • Dolls, faces or other representations of living forms with moving parts
- 19/10 • • Devices demonstrating the action of an article to be advertised
- 19/12 • using special optical effects
- 19/14 • • displaying different signs depending upon the view-point of the observer
- 19/16 • • involving the use of mirrors
- 19/18 • • involving the use of optical projection means, e.g. projection of images on clouds
- 19/20 • • with colour-mixing effects
- 19/22 • Advertising or display means on roads, walls or similar surfaces, e.g. illuminated
- 21/00 Mobile visual advertising** (combined visual and audible advertising G09F 27/00)
- 21/02 • by a carrier person or animal
- 21/04 • by land vehicles
- 21/06 • by aeroplanes, airships, balloons, or kites
- 21/08 • • the advertising matter being arranged on the aircraft
- 21/10 • • • illuminated
- 21/12 • • the advertising matter being towed by the aircraft
- 21/14 • • • illuminated
- 21/16 • • Sky-writing
- 21/18 • by ships or other floating means
- 21/20 • • illuminated
- 21/22 • Dispensing devices for pamphlets or similar advertising matter from vehicles (from aircraft B64D 1/00)
- 23/00 Advertising on or in specific articles, e.g. ashtrays, letter-boxes** (on or in vehicles G09F 21/00)
- 23/02 • the advertising matter being displayed by the operation of the article
- 23/04 • • illuminated
- 23/06 • the advertising matter being combined with articles for restaurants, shops, or offices (on paper articles G09F 23/10)
- 23/08 • • with tableware
- 23/10 • on paper articles, e.g. booklets, newspapers
- 23/12 • • on toilet paper
- 23/14 • on toys, games, puzzles, or similar devices
- 23/16 • on clocks, e.g. controlled by the clock mechanism
- 25/00 Audible advertising**
- 27/00 Combined visual and audible advertising or displaying, e.g. for public address**

G09G ARRANGEMENTS OR CIRCUITS FOR CONTROL OF INDICATING DEVICES USING STATIC MEANS TO PRESENT VARIABLE INFORMATION (arrangements for transferring data between digital computers and displays G06F 3/14; static indicating arrangements comprising an association of a number of separate sources or light control cells G09F 9/00; static indicating arrangements comprising integral associations of a number of light sources H01J, H01K, H01L, H05B 33/12; scanning, transmission or reproduction of documents or the like, e.g. facsimile transmission, details thereof H04N 1/00) [3, 4, 5]

Note(s)

1. This subclass covers indicator consoles, i.e. arrangements or circuits for processing control signals to achieve the display, e.g. for the calling up, reception, storage, regeneration, coding, decoding, addressing of control signals.
2. This subclass does not cover the structural details of the indicating devices, such as panels or tubes per se, or assemblies of individual light sources, which are covered by the relevant subclasses, e.g. H01J, H01K, H01L, G02F, G09F, H05B.
3. Contrary to subclass H04N, in which are classified display devices capable of representing continuous brightness value scales, this subclass is limited to devices using only a discrete number of brightness values, e.g. visible/non-visible.
4. The visual effect may be produced by a luminescent screen scanned by an electron beam, directly by controlled light sources, by projection of light, from controlled light sources onto characters, symbols, or elements thereof drawn on a support, or by electric, magnetic, or acoustic control of the parameters of light rays from an independent source.

- 1/00 Control arrangements or circuits, of interest only in connection with cathode-ray tube indicators [3]**
- 1/02 • Storage circuits (G09G 1/06-G09G 1/28 take precedence) [3]
- 1/04 • Deflection circuits [3]
- 1/06 • using single beam tubes (G09G 1/26, G09G 1/28 take precedence) [3]
- 1/07 • • with combined raster scan and calligraphic display [5]
- 1/08 • • the beam directly tracing characters, the information to be displayed controlling the deflection as a function of time in two spatial co-ordinates, e.g. according to a cartesian co-ordinate system [3]
- 1/10 • • • the deflection signals being produced by essentially digital means, e.g. incrementally [3]
- 1/12 • • • the deflection signals being produced by essentially analogue means [3]
- 1/14 • • the beam tracing a pattern independent of the information to be displayed, this latter determining the parts of the pattern rendered respectively visible and invisible [3]
- 1/16 • • • the pattern of rectangular co-ordinates extending over the whole area of the screen, i.e. television type raster [3]

- 1/18 • • • a small local pattern covering only a single character, and stepping to a position for the following character, e.g. in rectangular or polar co-ordinates, or in the form of a framed star [3]
- 1/20 • using multi-beam tubes (G09G 1/26, G09G 1/28 take precedence) [3]
- 1/22 • using tubes permitting selection of a complete character from a number of characters [3]
- 1/24 • using tubes permitting selection of individual elements forming in combination a character [3]
- 1/26 • using storage tubes [3]
- 1/28 • using colour tubes [3]
- 3/00 Control arrangements or circuits, of interest only in connection with visual indicators other than cathode-ray tubes [3]**
- 3/02 • by tracing or scanning a light beam on a screen [3]
- 3/04 • for presentation of a single character by selection from a plurality of characters, or by composing the character by combination of individual elements, e.g. segments [3]
- 3/06 • • using controlled light sources [3]
- 3/08 • • • using incandescent filaments [3]
- 3/10 • • • using gas tubes [3]
- 3/12 • • • using electroluminescent elements [3]
- 3/14 • • • • Semiconductor devices, e.g. diodes [3]
- 3/16 • • • by control of light from an independent source [3]
- 3/18 • • • using liquid crystals [3]
- 3/19 • • • using electrochromic devices [5]
- 3/20 • for presentation of an assembly of a number of characters, e.g. a page, by composing the assembly by combination of individual elements arranged in a matrix [3]
- 3/22 • • using controlled light sources [3]
- 3/24 • • • using incandescent filaments [3]
- 3/26 • • • • to give the appearance of moving signs [3]
- 3/28 • • • using luminous gas-discharge panels, e.g. plasma panels [3, 2013.01]
- 3/2807 • • • • with discharge activated by high-frequency signals specially adapted therefor [2013.01]
- 3/2813 • • • • using alternating current [AC] - direct current [DC] hybrid-type panels [2013.01]
- 3/282 • • • • using DC panels [7]
- 3/285 • • • • • using self-scanning [7]
- 3/288 • • • • using AC panels [7, 2013.01]
- 3/29 • • • • • using self-shift panels [5]
- 3/291 • • • • • controlling the gas discharge to control a cell condition, e.g. by means of specific pulse shapes [2013.01]
- 3/292 • • • • • • for reset discharge, priming discharge or erase discharge occurring in a phase other than addressing [2013.01]
- 3/293 • • • • • • for address discharge [2013.01]
- 3/294 • • • • • • for lighting or sustain discharge [2013.01]
- 3/296 • • • • • Driving circuits for producing the waveforms applied to the driving electrodes [2013.01]
- 3/297 • • • • • using opposed discharge type panels [2013.01]
- 3/298 • • • • • using surface discharge panels [2013.01]
- 3/299 • • • • • • using alternate lighting of surface-type panels [2013.01]
- 3/30 • • • using electroluminescent panels [3]
- 3/32 • • • • semiconductive, e.g. diodes [3]
- 3/34 • • • by control of light from an independent source [3]
- 3/36 • • • using liquid crystals [3]
- 3/38 • • • using electrochromic devices [5]
- 5/00 Control arrangements or circuits for visual indicators common to cathode-ray tube indicators and other visual indicators [5]**
- 5/02 • characterised by the way in which colour is displayed [5]
- 5/04 • • using circuits for interfacing with colour displays [5]
- 5/06 • • • using colour palettes, e.g. look-up tables [5]
- 5/08 • Cursor circuits [5]
- 5/10 • Intensity circuits [5]
- 5/12 • Synchronisation between the display unit and other units, e.g. other display units, video-disc players [5]
- 5/14 • Display of multiple viewports [5]
- 5/16 • Display of right-to-left language [5]
- 5/18 • Timing circuits for raster scan displays (specially adapted for television H04N) [5]
- 5/20 • Function-generator circuits, e.g. circle generators [5]
- 5/22 • characterised by the display of individual characters or indicia using display control signals derived from coded signals representing the characters or indicia with a character-code memory (G09G 5/42 takes precedence) [5, 7]
- 5/24 • • Generation of individual character patterns [5]
- 5/26 • • • for modifying the character dimension, e.g. double width, double height [5]
- 5/28 • • • for enhancement of character form, e.g. smoothing [5]
- 5/30 • • Control of display attribute [5]
- 5/32 • • with means for controlling the display position [5]
- 5/34 • for rolling or scrolling [5]
- 5/36 • characterised by the display of individual graphic patterns using a bit-mapped memory (G09G 5/42 takes precedence) [5, 7]
- 5/37 • • Details of the operation on graphic patterns (G09G 5/38 takes precedence) [7]
- 5/373 • • • for modifying the size of the graphic pattern [7]
- 5/377 • • • for mixing or overlaying two or more graphic patterns (G09G 5/02, G09G 5/397 take precedence) [7]
- 5/38 • • with means for controlling the display position [5]
- 5/39 • • Control of the bit-mapped memory [7]
- 5/391 • • • Resolution modifying circuits, e.g. variable screen formats [7]
- 5/393 • • • Arrangements for updating the contents of the bit-mapped memory [7]
- 5/395 • • • Arrangements specially adapted for transferring the contents of the bit-mapped memory to the screen (G09G 5/399 takes precedence) [7]
- 5/397 • • • • Arrangements specially adapted for transferring the contents of two or more bit-mapped memories to the screen simultaneously, e.g. for mixing or overlay (G09G 5/02 takes precedence) [7]
- 5/399 • • • using two or more bit-mapped memories, the operations of which are switched in time, e.g. ping-pong buffers [7]
- 5/40 • characterised by the way in which both a pattern determined by character code and another pattern are displayed simultaneously, or either pattern is displayed selectively, e.g. with character code memory and a bit-mapped memory [5]

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- 5/42 • characterised by the display of patterns using a display memory without fixed position

correspondence between the display memory contents and the display position on the screen [7]