

CODE	TITLE	SCOPE
S02-A05B1	Diameter	From 200201 see S02-A05C1.
S02-A05B2	Length, width, thickness	From 200201 see S02-A05C2.
S02-A05B3	Deformation, depth, contour	From 200201 see S02-A05C3.
S02-A05B4	Angles, alignment, position	From 200201 see S02-A05C4.
S02-A05B5	Area, roughness	From 200201 see S02-A05C5.
S02-A05B9	Other dimensional measurement using sound	From 200201 see S02-A05C1.
U11-D03B2A	Fuses, antifuses	From Jan 2002 see U12-C04. For mfr. of fuse see U11-C05G2A.
W01-A03A	Access control	This code is discontinued from 2002, the subject matter covered being transferred to W01-A06F1. W01-A03A remains valid and searchable for records between 1987 and 2001 and was assigned with W01-A06 codes for network aspects, e.g. with W01-A06B5A for access control in LANs. See also T01 codes, such as T01-H05 and T01-H07 codes.
W01-A03A1	Carrier sense multiple access (CSMA/CD and CA)	This code is discontinued from 2002, the subject matter covered being transferred to W01-A06F1A. W01-A03A1 remains valid and searchable for records between 1987 and 2001. During this time W01-A03A1 was combined with W01-A06F to indicate Ethernet. Request handling for interconnection or data transfer in computer systems is covered by T01-H05 codes, e.g. T01-H05B3 for contention avoidance for access to common bus.
W01-A03A2	Time division multiple access (TDMA)	This code is discontinued from 2002, the subject matter covered being transferred to W01-A06F1G. W01-A03A2 remains valid and searchable for records between 1987 and 2001. See W02-C03B and W02-K codes, e.g. W02-C03B1D and W02-K02D, for TDMA aspects of satellite radio systems.
W01-A03A3	Token pass	This code is discontinued from 2002, the subject matter covered being transferred to W01-A06F1E. W01-A03A3 remains valid and searchable for records between 1987 and 2001.
W01-A08A2	Repeater, relay circuits*	This code is discontinued from 2002, the subject matter covered being transferred to W01-A06G5G. W01-A08A2 remains valid and searchable for records between 1992 and 2001. During this time W01-A08B1 was regarded as the general code for baseband data transmission repeaters.

CODE	TITLE	SCOPE
W01-A08B1	Repeater and relay circuits	This code is discontinued from 2002, the subject matter covered being transferred to W01-A06G5G. W01-A08B1 remains valid and searchable for records between 1992 and 2001. During this time W01-A08B1 was regarded as the general code for baseband data transmission repeaters and W01-A08A2 was assigned for repeaters specific to synchronous or start-stop systems. From 2002, repeaters specific to baseband data transmission will be indicated by W01-A06G5G and a W01-A08 code as appropriate.
W02-B04A	Reducing undesirable effects, e.g. edge scattering, cross-polarisation*	From 2002 this code is replaced by W02-B08P5E, with other W02-B04 codes assigned as appropriate.
W02-B05B8	Array radiating different polarisation	From 2002, this topic is covered by assignment of a suitable W02-B05 code in conjunction with W02-B08R5 which represents antennas with multiple polarisation characteristics in general.
W02-F07	Bandwidth/bit-rate reduction, PCM systems	See T01-J10D for computer-based image coding and compression, and U21-A codes for coding in general. (Bandwidth reduction for facsimile and analogous systems is covered by W02-J03B codes). From 2002, the codes W02-F07 to W02-F07K are discontinued and are replaced by the single code W02-F07M - 'Digital image transmission'. W04-P01A codes are still assigned as before, and may be used to highlight the type of coding. (Prior to 2002, the W02-F07 codes were used for methods and complete systems for PCM TV).
W02-F07B	Transform coding	See W04-P01A3 for video coding circuits and methods also.
W02-F07C	Predictive coding	See W04-P01A5 for video coding circuits and methods.
W02-F07C1	Motion detection and compensation	See W04-P01A5A for video coding circuits and methods also. Motion detection and estimation for hybrid coding systems is covered by W02-F07E5 codes (prior to 2002) and W04-P01A4 codes.
W02-F07C1A	Motion detection	
W02-F07C1C	Motion compensation	
W02-F07D	Subsampling	
W02-F07E	Hybrid coding	See also W04-P01A4 codes for coding circuits and methods.
W02-F07E1	Combined transform and predictive coding	Includes MPEG system coding and variants.
W02-F07E5	Motion detection and compensation	See W04-P01A1 for motion detection other than for coding purposes, and W02-F07C1 (prior to 2002) or W04-P01A5A for motion detection and compensation specifically for predictive coding.
W02-F07E5A	Motion detection system	
W02-F07E5C	Motion compensation system	

CODE	TITLE	SCOPE
W02-F07K	Coding based on fractals	Coding methods and systems using fractals are also coded in W04-P01A8.
W04-B02	Audio/video heads and head cleaning	From 2002 this sub-group is no longer used, the subject matter now being coded in T03-A03 and T03-A04 codes only. The codes W04-B02A and W04-B02C remain valid and fully searchable for records prior to 2002.
W04-B02A	Audio/video head	Heads per se are assigned T03-A03 codes also. Includes head manufacture, which is also assigned T03-A04A codes. (See V02-H2 and V02-H05 also).
W04-B02C	Cleaning and demagnetisation of heads	Search with T03-A04B codes to discriminate particular aspects e.g. T03-A04B1 for demagnetising (also coded in V02-D); T03-A04B3B and T03-N03 for cleaning cassette.
W04-B03	Head positioning	From 2002 this sub-group is no longer used, the subject matter now being coded in T03-A05 only. The codes in this sub-group remain valid and fully searchable for records prior to 2002.
W04-B03A	For discs or drums	
W04-B03B	For tape	For synchronisation with tape movement, see W04-E10 also.
W04-B03B1	For helical scan	Prior to 9201 only, search W04-E01A with W04-B03B for this aspect. See T03-A05D codes for helical scan head positioning also, including details of drum per se.
W04-B03B1A	Dynamic adjustment of head position	Also assigned T03-A05A1 codes. Includes speed control, track following, alignment, and also adjusting elements per se. (See V06-M06D for piezoelectric elements).
W04-B03B1C	Head rotary drive per se	Includes motor per se and drive components.
W04-B04	Record carrier positioning	From 2002 this sub-group is no longer used, the subject matter now being coded in T03 only. The codes in this sub-group remain valid and fully searchable for records prior to 2002.
W04-B04A	For discs or drums	From 2002 this code is no longer used, the subject matter now being coded in T03-F only. This code remains valid and fully searchable for records prior to 2002. Includes housing in which carrier is driven during normal operation, see W04-E02A codes also from 9201.
W04-B04B	For tape	From 2002 the codes in W04-B04B are no longer used, the subject matter now being coded in T03-E only. The codes W04-B04B1 to W04-B04B7A remain valid and fully searchable for records prior to 2002. For synchronisation with head movement, see W04-E10 also.
W04-B04B1	Tape containers	For cassettes search with W04-E02B1 codes and T03-H01B codes.
W04-B04B3	Tape drive system	Tape drive systems are also assigned T03-E codes.
W04-B04B3A	Tape drive components	
W04-B04B3C	Tape speed control	For combined head/tape speed control search with W04-B03B1A and W04-E10.
W04-B04B5	Tape drive mode control	

CODE	TITLE	SCOPE
W04-B04B5A	Automatic control of operating mode	Also coded in T03-E05A or its subdivisions.
W04-B04B5C	Manual control of operating mode	Includes switches, operating keys etc. Also assigned T03-E05B.
W04-B04B6	Tape cassette loading and changing	Also assigned T03-E01B or its subdivisions.
W04-B04B7	Tape looping and threading	Also assigned T03-E01C.
W04-B04B7A	Looping/threading for helical-scan tape	Also coded in T03-E01C1 and T03-N02.
W04-C01	Record carriers	From 2002 this code is no longer used, the subject matter being covered in T03-B01 only. However, W04-C01F remains valid and is used to indicate hard formatting aspects relevant to audio/visual optical recording media. W04-C01A to W04-C01E remain valid and fully searchable for records prior to 2002.
W04-C01A	Record carrier substrate	
W04-C01B	Light-sensitive layers	
W04-C01C	Protective and (anti-) reflective layers	
W04-C01E	Record carrier manufacture	
W04-C02	Heads	From 2002 this sub-group is no longer used, the subject matter now being coded in T03-B02B only. The codes W04-C02A to W04-C02C remain valid and fully searchable for records prior to 2002.
W04-C02A	Light source and photodetector	
W04-C02A1	Light source	Includes semiconductor laser. For full details of semiconductor lasers see U12-A01B codes and corresponding codes in V08, which also includes other laser types.
W04-C02A5	Photodetector	Includes photodetector for reading from carrier and for focus detection. For details of photodetectors, see U12-A02B codes, e.g. U12-A02B2A for APD and other types of photodiode.
W04-C02B	Lens and optical system	
W04-C02C	Head cleaning	Includes use of dummy cleaning carrier.
W04-C03	Head positioning (incl. focusing)	From 2002 this sub-group is no longer used, the subject matter now being coded in T03-B02A only. The codes W04-C03A to W04-C03H remain valid and fully searchable for records prior to 2002. See W04-C10 codes to distinguish head positioning for e.g. discs or tapes.
W04-C03A	For focusing	
W04-C03B	For track selection and alignment	Includes e.g. linear motors (see V06-M codes also), and track access/tracking servo systems.

CODE	TITLE	SCOPE
W04-C03D	Control circuit for light source	Also coded in T03-B02A7. Includes laser diode bias control - see U12-A01B4 and corresponding codes in V08.
W04-C03H	Head positioning for double-sided disc	Includes dual-head systems and arrangements for single head to move to other side of disc.
W04-C04	Record carrier positioning	From 2002 this sub-group is no longer used, the subject matter now being coded in T03-B03, T03-E and T03-F. The codes W04-C04A to W04-C04B remain valid and fully searchable for records prior to 2002. Prior to 2002, W04-E02 codes are also assigned, together with appropriate subdivisions of T03-B03.
W04-C04A	Record carrier container	Covers container in which carrier is driven, search with W04-E02 codes for further details. Storage containers are covered by W04-L01 codes.
W04-C04B	Record carrier drive	Search with W04-E02 codes for further details, e.g. W04-E02A5 codes for disc changing.
W04-D01	Record carriers	From 2002 this sub-group is no longer used, the subject matter now being coded in T03-C and T03-D01A. The codes in this sub-group remain valid and fully searchable for records prior to 2002. Covers mainly capacitive record carriers (also assigned T03-C01).
W04-D01A	For 'combination' recording e.g. magneto-optical	See T03-D01A codes also.
W04-D01A1	Carrier manufacture	Also assigned T03-D01A8 codes.
W04-D02	Heads	From 2002 this code is no longer used, the subject matter now being coded in T03-C, T03-D01C and T03-D01F1. This codes remains valid and fully searchable for records prior to 2002. Also assigned T03-D01C codes for optical heads and T03-D01F1 for magnetic heads when magneto-optical recording is involved.
W04-D03	Head positioning	From 2002 this code is no longer used, the subject matter now being coded in T03-C, T03-D01D and T03-D01F1A. This codes remains valid and fully searchable for records prior to 2002. For magneto-optical recording includes focusing (also assigned T03-D01D1 codes) and track selection/alignment (also T03-D01D3 and T03-D01D5 codes).
W04-D04	Record carrier positioning	From 2002 this code is no longer used, the subject matter now being coded in T03-C and T03-D01B, T03-E and T03-F. This codes remains valid and fully searchable for records prior to 2002. For records prior to 2002 search with W04-E02 codes for a more detailed breakdown of subject matter.
<search_terms> Turntable, drive, carriage, load, motor		

CODE	TITLE	SCOPE
W04-E01	Head positioning	From 2002 this sub-group is no longer used, the subject matter now being coded in T03-G only. The codes W04-E01A to W04-E01C remain valid and fully searchable for records prior to 2002.
W04-E01A	Helical scan	
W04-E01B	For longitudinally scanned tape	
W04-E01C	For discs	
W04-E02	Record carrier positioning	From 2002 this sub-group is no longer used, the subject matter now being coded in T03-E, T03-F and T03-H only. The codes in this subgroup remain valid and fully searchable for records prior to 2002. These codes are only assigned for generally applicable cases. See appropriate codes in W04-B, W04-C or W04-D which take precedence. For motor and other position transducer aspects see V06 codes. Includes housing in which carrier is driven during normal operation.
W04-E02A	For discs	
W04-E02A1	Disc cassettes per se	
W04-E02A1A	Disc cassette manufacture	
W04-E02A1C	Disc cassette construction	
W04-E02A3	Disc driving arrangement	See also T03-F02 (and T03-N01) codes.
W04-E02A3A	Disc drive components	Includes motor (see V06-M codes also), turntable, spindle brakes, etc.
W04-E02A3C	Disc drive speed control	Motor control circuits are also assigned V06-N codes.
W04-E02A5	Disc changing systems	See also T03-F01 and T03-N01 codes. For general aspects of optical disc 'jukebox' systems, see W04-C10A5. See also T03-Q codes for library systems in general.
W04-E02A5A	Single feeding of manually-loaded disc	
W04-E02A5C	Selecting from simultaneously-loaded discs	Includes carousel-type arrangements enabling initial loading of several discs for playing sequentially or in selected order. Arrangements to feed one disc at a time into recording/playing equipment from a library of carriers are covered by W04-E02A5E.
W04-E02A5E	Automatic feeding from library of discs	Also coded in T03-Q05 codes and in T03-F01F5 (and T03-N01).
W04-E02B	For tape	
W04-E02B1	Cassettes	Only includes cassettes per se, not all cassette recording related aspects. For magnetic tape cassette search with W04-B04B1. Also coded in T03-H01B codes (or T03-H01C for loop-type cassette) and T03-N03. For optical tape cassette search with W04-C04A.
W04-E02B1A	Cassette manufacture	Also coded in T03-H01B8 codes.
W04-E02B1C	Cassette constructional details	

CODE	TITLE	SCOPE
W04-E02B1E	Cassette for helical-scan tape	This code is only assigned where the helical-scan aspect impacts on the design to a significant extent. See T03-N02 for all aspects of helical scan equipment and carrier cases.
W04-E02B3	Drive	From 9201 W04-B04B3 codes are assigned in preference for magnetic tape recorders.
W04-E02B5	Operating mode control	
W04-E02B5A	Automatic control	For magnetic tape recorders, see W04-B04B5A from 9201.
W04-E02B5C	Manual control	For magnetic tape recorders, see W04-B04B5C from 9201.
W04-E02B7	Helical scan	
W04-E03	Record carriers	From 2002 this sub-group is no longer used, the subject matter now being coded in T03-H only. The codes in this subgroup remain valid and fully searchable for records prior to 2002. This code covers general aspects of record carriers.
W04-E03A	Labels and authentication marks	
W04-E03A1	Labels	Includes labels applied to carrier itself and to housing, e.g. cassette case, jewel box, etc..
W04-E03A5	Authentication markings for record carrier	Includes both human-readable and machine-readable markings, such as bar coding (see T04-A and T04-C codes also). Identification of counterfeit audio or video recordings by added signals is included in W04-G01L3 and W04-F01L3 respectively.
W04-E10	Head-record carrier motion synchronisation	From 2002 this code is no longer used, the subject matter now being coded in T03-A05, T03-E, T03-F, T03-G and T03-J03 only. This code remains valid and fully searchable for records prior to 2002
W04-L01	For record carriers	From 2002 this sub-group is no longer used, the subject matter now being coded in T03-L01 only. The codes in this sub-group remain valid and fully searchable for records prior to 2002. Covers cassette boxes, racks, record cases, etc., but not casings in which carriers are driven during recording/playback process.
W04-L01A	Record carrier container	Covers container for individual carrier. Storage racks are covered by W04-L01C codes.
W04-L01A1	For discs	
W04-L01A3	For tape	
W04-L01C	Storage racks, boxes, cases	Covers racks and similar structures used for storage only, from which carrier is removed with its individual container. (Individual containers are covered by W04-L01A codes). This code is also used for display arrangements in retail stores.
W04-L01C1	For discs	
W04-L01C3	For tape)	
W05-B05B3	Using telephone transmission	From 2002 this code is discontinued and the subject matter covered is transferred to W05-B05G1. W05-B05B3 remains valid and searchable for records between 1992 and 2001. Prior to 2002, W01-C05A was routinely assigned also for inventions making use of the telephone network for alarm transmission.

CODE	TITLE	SCOPE
W05-D01	Digital encoders	This code and its subdivisions are discontinued from 2002, the idea of 'absolute' position encoders being conveyed by a new U21 code, U21-A03J5, with other U21-A03J codes being assigned also to specify the technology used. W05-D01 codes remain valid and searchable for records prior to 2002, and were used for rotary or linear encoders giving unique digital representation of position (see U21-A03 codes also) but not systems determining speed or position by counting pulses generated by movement (covered by S02-G01 codes).
W05-D01A	Magnetic or inductive	
W05-D01B	Photoelectric	
W05-D01X	Other	
W05-D03	Electric signal transmission	This code and its subdivisions are discontinued from 2002, the subject matter being covered by new subgroups for 'Transmission medium' (W05-D06) and 'Function and mode' (W05-D08). W05-D03 codes remain valid and searchable for records between 1980 and 2001. W05-D06 'medium' codes are assigned on the basis that pure applications with no novelty in the communications are not coded in W01 or W02. Prior to 2002, codes from those classes were routinely assigned in addition to W05-D03 codes.
W05-D03A	Using pulses	
W05-D03B	Using frequency, phase, current or voltage magnitude	From 2002 analogue measurement or control signal transmission is indicated by W05-D08A.
W05-D03C	Telephone line	See appropriate W01-C05B3 code for telephonic transmission details also. From 2002, telephone line transmission for measurement and control signals is covered by W05-D06G1.
W05-D03D	Power line	Also assigned W02-C01A3 and X12-H03 codes. From 2002, power line transmission for measurement and control signals is covered by W05-D06P.
W05-D03E	Wired system; dedicated wiring	See W01-A06 codes for networks e.g. LAN, WAN, etc. From 2002, dedicated wired systems for transmission of measurement and control signals are covered by W05-D06R.
W05-D03X	Other electric signal transmission aspects	Includes inductive systems of e.g. rotary transformer type, with W05-D04. and V02 codes assigned as appropriate. From 2002 see W05-D06T1.

CODE	TITLE	SCOPE
<search_terms> Dynamo-electric devices, rotating/stationary part transmission using coils		
W05-D04	Using radio link; non-electric systems	This code and its subdivisions are discontinued from 2002, the subject matter being covered by new subgroups for 'Transmission medium' (W05-D06) and 'Function and mode' (W05-D08). W05-D04 codes remain valid and searchable for records between 1980 and 2001. W05-D06 'medium' codes are assigned on the basis that pure applications with no novelty in the communications aspect are not coded in W01 or W02. Prior to 2002, codes from those classes were routinely assigned in addition to W05-D04 codes.
W05-D04A	Radio link	See W02-C03 codes for radio systems in general, and W02-G codes for specific details of radio equipment per se. From 2002 see W05-D06A1A for radio systems or W05-D06G5 codes for radio telephone systems as appropriate.
W05-D04A1	Remote control	From 2002, this topic is represented by assignment of W05-D08C (remote control) with W05-D06A1A for general radio systems or W05-D06G5 codes for radio telephone systems as appropriate.
W05-D04A5	Remote monitoring	From 2002, this topic is represented by assignment of W05-D08E (remote monitoring) with W05-D06A1A for general radio systems or W05-D06G5 codes for radio telephone systems as appropriate.
W05-D04B	Optical link	See W02-C04 codes for optical transmission in general.
W05-D04B1	Optical fibre	
W05-D04B3	Free space transmission	
W05-D04B7	Remote monitoring	From 2002, this topic is represented by assignment of W05-D08E (remote monitoring) with W05-D06A3 for free space optical systems or W05-D06C for optical fibre-based systems as appropriate.
W05-D04B9	Other optical system details	
W05-D04C	Ultrasonic link	From 2002, this topic is represented by assignment of W05-D06A5.
W05-D04D	Pneumatic, hydraulic, mechanical transmission*	From 2002, this topic is represented by assignment of W05-D06M.
W05-D04D1	Mud-pulse telemetry	See also X25-E02A1 for well logging. From 2002, this topic is represented by assignment of W05-D06M1.

CODE	TITLE	SCOPE
W05-D04G	Using transponders	Use with other W05-D04 codes as appropriate. RF transponder systems are also assigned W02-G05 codes. From 2002, this topic is represented by assignment of W05-D08G.