

EPI Final Amended Codes

CODE (max. 10 chars incl. spaces)	REASON	NEW TITLE	CURRENT TITLE	NEW SCOPE NOTES	CURRENT SCOPE NOTES (only include if scope notes are to be changed)
Section Q1					
Q13 Powertrain, Chainset, Transmission Systems and their control					
Q13-A	Change scope notes		Powertrain/Transmission systems and their control	For electrical aspects of transmission systems used in electric vehicles or motor vehicles, respectively see X21-A02A and X22-G codes only.	For electrical aspects of transmissions see X22-G codes only.
Q14 Vehicle Accessories					
Q14-C03	Change scope		Visual signalling, e.g. reflectors	Includes optical signalling devices such as reflectors and e.g. posts mounted on bumper to highlight corner of vehicle for assisting parking or collision prevention. For reflectors built into vehicle light see X22-B and X26-D01A codes only.	For reflectors built into vehicle light see X22 and X26 codes only.
Q14-C06	Change scope			See also Q19-A or Q19-B for bicycles and motorcycles respectively. Also includes side impact protection bars (also see Q17-A06 for doors). Also includes flip-up rollover bars used cabriolet vehicles (also see Q19-P).	See also Q19-A or Q19-B for bicycles and motorcycles respectively. Also includes side impact protection bars (also see Q17-A06 for doors).
Q14-N	Change title		Windscreen wipers/washers		
Q14-X	Change scope			Includes removable aftermarket car mats (see Q17-A10 instead for permanent fixings and fixed interior trim/carpets), and e.g. waterproof car covers used when vehicle is parked.	"None"
Q16 Vehicle Servicing, maintenance, cleaning equipment, vehicle design and manufacture					
Q16-D01	Change title	Vehicle manufacture/assembly	Production line assembly equipment		
Q17 Vehicle construction, fittings, propulsion arrangements					
Q17-A06	Change title/scope	Doors; bonnets; tailgates	Doors	Includes mechanical aspects of openings such as doors, boots and bonnets. For electrical aspects such as electric sliding doors or electric door locks, instead see X22-X05 and X22-D01 codes respectively. Includes side impact beams (see also Q14-C06 for crash bars per se).	For electrical aspects such as electric sliding doors or electric door locks, instead see X22-X05 and X22-D01 codes respectively. Includes side impact beams (see also Q14-C06 for crash bars per se).
Q17-A07	Change scope			Includes window glass per se and mechanical winders for raising and lowering windows. See X22-H codes only for electrical aspects of power windows.	For electrical aspects see X22-H codes only.
Q17-A10	Change Scope			Includes decorative trim elements such as external rubbing strips, all interior trim, and liners and covers for load compartments such as pick-up truck load beds. For car weatherproof covers used when vehicle is parked see Q14-X instead.	Includes decorative trim elements and liners for load compartments such as pick-up truck load beds.
Q17-E01	Change scope			Includes mechanical engine mountings(see also Q51-X). Mechanical vibration reduction mountings can also be coded in Q17-N. For electrically controlled vibration reducing engine mountings see X22-A12 only.	This code can be used to highlight vehicle engine application. For electrically controlled vibration reducing engine mountings see X22-A12 only.
Q17-E03	Change scope			Includes e.g. sumps and oil pick up pipes. See X22-A18 for electrical oil pumps etc.	Includes e.g. sumps and oil pick up pipes. See X22-A09 for electrical oil pumps etc.
Q17-N	Change scope			Includes all mechanical aspects associated with reducing noise, vibration and harshness within vehicle, such as use of sound deadening materials. This can be used in conjunction with other Q codes as appropriate, e.g. with Q12 for suspension based NVH reduction. For electrical NVH aspects see the relevant X22 codes such as X22-G03N for transmission based NVH reduction, X22-X08 for general passenger compartment noise reduction and X22-A12 for engine noise/vibration reduction. See Q51-J01 instead for vehicle exhaust silencers.	Includes all mechanical aspects associated with reducing noise, vibration and harshness within vehicle, such as use of sound deadening materials. This can be used in conjunction with other Q codes as appropriate, e.g. with Q12 for suspension based NVH reduction. For electrical NVH aspects see the relevant X22 codes such as X22-G03N for transmission based NVH reduction, X22-X08 for general passenger compartment noise reduction and X22-A12 for engine noise/vibration reduction.
Q18 Brake Systems; Steering Systems; Control					
Q18-A30	Change scope			Includes deployable braking parachutes. Also includes exhaust braking, e.g. used on diesel engine trucks (see also Q19-C02 and Q51-D03) for sustained slowing down long hills, to prevent overheating of mechanical friction brakes (also see Q51-J07 for exhaust systems per se).	Includes deployable braking parachutes. Also includes exhaust braking e.g. used on diesel engine trucks for sustained slowing down long hills, to prevent overheating of mechanical friction brakes (also see Q51-J for exhaust systems per se).

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Section Q2					
Q22 Hand/Animal Drawn Vehicles					
Q22 (main class heading)	Change title	Hand/foot/animal drawn vehicles			
Q22-A02	Change scope			Includes four-wheeled barrows and mechanical aspects of shopping trolleys (see X25-F05A for electrical aspects of shopping trolleys).	Includes four-wheeled barrows.
Q24 Ships; Waterborne vessels; Related Equipment					
Q24-A01P	Change title	Multiple hull arrangements			
Q24-E02B	Change scope			For gas turbine engines per se, see also Q52 codes.	"None"
Q24-P11	Change title	Submarines; submersible craft			
Q24-P12	Change title	Flying vessels			
Q24-P30	Change scope			Includes swamp boats and amphibious vessels (see also Q19-R01).	Includes swamp boats and amphibious vessels (see also Q19-R01). Also includes non-specific commercial vessels.
Q24-X05	Change scope			See W06-C08 for electrical aspects of ship manufacture. See Q51-M or Q52-M respectively for manufacture of IC and gas turbine engines used in ships.	See W06-C08 for electrical aspects of ship manufacture.
Q25 Aircraft; Aviation, Cosmonautics					
Q25-C02B	Change scope			For gas turbine engines per se, see also Q52 codes.	"None"
Q25-S04	Change scope			Includes solid rocket boosters (see also Q52-B03 for rocket engines per se).	Includes solid rocket boosters.
Q25-X05	Change title/scope	Aircraft/spacecraft manufacture		Includes both aircraft and spacecraft manufacturing systems, and (dis)assembly equipment and methods. See W06-B08 for electrical aspects of aircraft or spacecraft manufacture. See Q51-M or Q52-M respectively for manufacture of IC and gas turbine engines used in aircraft.	
Section Q5					
Q51 Internal Combustion Engines; Reciprocating Engines; Rotary Engines					
Q51-A	Change title	Reciprocating positive displacement engines	Reciprocating positive displacement engines including steam engines		
Q51-A01B	Change scope			This code is only applied when it is especially important to highlight the fact that an engine has multiple cylinders, or when the whole multicylinder engine is being claimed and further Q51 codes might not be applied. It is normally assumed that an engine will have multiple cylinders unless otherwise specified. Includes, in-line 4, V5, straight/V6, V8, W10, V12 etc. engines.	Includes, in-line 4, V5, straight/V6, V8, W10, V12 etc. engines.
Q51-A03D	Change scope			Includes oil sump pans (see also Q51-F codes). See Q51-F03 for crankcase/cam cover breathing arrangements.	
Q51-C	Change title	Gas-driven positive displacement engines	Hot gas positive displacement engines		
Q51-C01	Change title	Open cycle hot gas positive displacement engines; Steam engines	Open cycle	Includes reciprocating steam engines. See Q52 instead for non-positive displacement steam turbines. This code can be used in conjunction with other Q51 codes as appropriate, e.g. Q51-A03B for steam engine pistons.	
Q51-C02	Change title	Closed cycle hot gas positive displacement engines	Closed cycle		
Q51-E05B	Change search term				
Q51-F01	Change scope			Includes oil pumps and sump pans.	
Q51-H01B	Change scope			Includes fuel systems using compressed air or mechanical control. Can also be applied to highlight novel mechanical aspects of EM fuel injection valves (also see X22-A02A codes for electrical fuel injection apparatus). See X22-A03A1 codes only for electric fuel injection control.	Includes fuel systems using compressed air or mechanical control. See X22-A02A codes for electrical fuel injection apparatus and X22-A03A1 codes for fuel injection control.
Q52 Reaction Engines; External combustion; Gas Turbine; Rockets					
Q52-A	Change title	Gas/steam turbine engines			
Q52-A01	Change title/scope	Turbine engine type		Prior to 2007, Q52-A01 was used to highlight turbofan engine application, which is now transferred to Q52-A01C.	
Q52-B01	change scope/search			Includes pulse jet engine where gaseous fuel/air mixture is combusted in pulses to generate propulsive effort which is a reaction to the rearward flow of hot gases.	None
Q52-B04	Change scope			Includes composite pulse, ram, rocket engines. Also includes hybrid pulse detonation engines capable of operating in air-breathing and rocket modes.	Includes SCRAM jets.
Q54 Non-positive displacement fluid engines (i.e. driven by fluid); Miscellaneous motors and machines for producing mechanical power/thrust					
Q54-A	Change title/scope/search	Water turbines	Impulse type engines	Prior to 2007, this code was used for impulse engines having transportation interest.	Includes turbines with jets of high velocity liquid impinging on bladed or similar rotors, e.g. Pelton wheels, waterwheels.

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Section Q6					
Q61 Fastening Elements; Connections					
Q61-E	Change scope			Includes dowel and plug type connections that are inserted or screwed into hole, with e.g. expanding bodies or tabs engaging hole or gripping reverse side of wall.	None
Q62 Shafts and Bearings					
Q62-G02C1	Change scope			Includes motor vehicle wheel bearings subject to axial (cornering force) and radial (vehicle weight) loads. They are usually mounted in pairs facing opposite directions so that they can handle thrust in both directions.	Includes motor vehicle wheel bearings subject to axial (cornering force) and radial (vehicle weight) loads. They are usually mounted in pairs facing opposite directions so that they can handle thrust in both directions.
Q66 Valves; taps; Cocks; Vents					
Q66-P04	Change search term				
Q68 Other Engineering Elements					
Q68-A	Change title	Frames; Casings; Beds, Supports			
Q68-A01	Change title/scope	Frames; Casings			
Q68-A02	Change title/scope	Beds		Includes mounting of engines on foundations, e.g. for test purposes.	
Q68-A03	Change title/scope	Stands; Trestles; Supports		Includes mounting of engines on foundations, e.g. for test purposes.	
Q69 Storing/distributing gas/liquid					
Q69-B01	Change scope			Includes pressurised vehicle fuel tanks, e.g. containing LPG. See also Q69-B for fixed capacity fuel tanks.	None
Section S					
S01 Electrical Instruments					
S01-G02	Change title	Tubes, semiconductor devices and display panels	Tubes and semiconductor devices		
S01 Engineering Instrumentation					
S02-B08E	Change Title/Scope	Display and indication aspects	Display aspects	For novel visual display aspects see S02-K04C; for audio output, see S02-K04A and possibly also W04-V for speech synthesis; for haptic output, see S02-K04D.	For general display aspects see S02-K04 and S02-K06.
S02-C01X	Change scope	Other flow meters		Includes using camera to image fluid to determine flowrate.	none
S02-C06X	Change scope	Other level indicating		Includes dip-sticks and observable marks or scales on transparent vessel. Also includes level indicating using measurement of temperature.	Includes dip-sticks and observable marks or scales on transparent vessel.
S02-E	Change scope	Measurement of mechanical vibrations		Includes measurement of sound intensity.	none
S02-J05			Static or dynamic balance	Rotor, rotating, motor, weight, bearing, moment of inertia and dynamic balance/unbalance sensor	Rotor, rotating, motor, weight, bearing, moment of inertia and dynamic balance/unbalance sensor
S03 Scientific Instrumentation					
S03-E04C3	Change search term	Optical computerised tomography			
S03-E12A	Change title/scope	By analysing weight/ by weighing	Gravimetric Analysis	Includes gravimetric analysis.	none
S03-F09	Change title	Moisture content (incl. hydrometers); detecting flaws or contamination	Moisture content (incl. hydrometers); detecting flaws		
S05 Electrical Medical Equipment					
S05-D01B5	Change title/scope	Heart rate, pulse	Heart rate		Measuring or recording pulse. See S05-A05 for exercise.
S05-D01D	Change title	Using electric currents or magnetic fields	Using electric currents or magnetic fields; audiometry		
S05-X	Change Scope/ Search			Includes teaching, atomising and enuresis detection. For teaching involving training and simulations aids, see also S05-P. See S05-V from 2007 for veterinary applications.	Includes veterinary (see also X25-N02 codes), breathing monitoring, transplanting, teaching, atomising, and enuresis detection.
S06 Electrophotography and Photography					
S06-A01A9	Change scope	Other (photoconductive layer aspects)		Includes aspects of photoconductive belt/drum not covered by other S06-a01a codes. Also includes details for facsimile photoconductor layers.	Includes aspects of photoconductive belt not covered by other S06-a01A codes. Applying lubricant to drum/photoconductor surface. Also includes details for facsimile photoconductor layers.
S06-A12B	change title	For different paper sizes	For different paper size; clearing jams	For feeding paper of different lengths and thickness. From 2007 see S06-A12D for clearing jams.	For clearing jams in fixing system see also S06-A06B
S06-A17	Change scope	Recycling systems		From 2005 covers all aspects of recycling. See also T04-G11B for printer, and/or W02-J05D for facsimile. See also X25-W04 for electrical aspects of recycling systems in general.	From 2005 covers all aspects of recycling. See also T04-G11B for printer. See X25-W04 for recycling systems in general.
S06-B03A1	Change scope	Pre-light emission		Pre-light emission before discharge of flash to prevent red eye. See only W04-M01H codes if for digital camera.	Pre-light emission before discharge of flash to prevent red eye.
S06-B04	Change scope	Film processing		Electrical aspects of developing exposed film, exposing photographic paper, scanning negative, developing exposed film and paper. Includes electrical aspects of X-ray film processing	Electrical aspects of developing exposed film, exposing photographic paper, scanning negative, developing exposed film and paper. Includes electrical aspects of X-ray film processing. Does not include electrical aspects of film manufacture or details of film material.

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S06-B04A	Change Scope	Photographic printing apparatus		Electrical aspects of printer for wet developing of photographic film or paper to produce photographic print. Control and monitoring of process. For positive or negative scanning to provide digital image to computer and computer output appt. see S06-B06B. For printing from digital camera see also W04 esp. W04-D10, for non-wet printing see T04-G.	
S06-A12D	Change title	Paper skew detection, skew correction, clearing jams	Paper skew detection, skew correction	For clearing jams in fixing system see also S06-A06B	
Section T					
T01 Digital Computers					
T01-C08A	Change Scope	Speech recognition/synthesis input/output		See also W04-V codes for sound wave analysis/synthesis, speech to text, text to speech and T01-J18 for speech/audio processing.	See also W04-V codes for sound wave analysis/synthesis and T01-J18 for speech/audio processing.
T01-F05A	Change Scope	High-level language and language processors		Binary Compilers and Assemblers for e.g. operating system compilation. Use of Application Programming Interface (API), Dynamic Link Libraries (DLLs) during program execution. From 2007; for use of API during software development see T01-J20B1, and for Compilers and Assemblers used in software development, see T01-J20B1.	Includes compilers and assemblers
T01-F05B2	Change Scope	Configuring	Configuring	Boot-up and program loading. Hot configuration. Version management of software e.g. BIOS firmware. For version management of software code see T01-F05F or T01-J20B2 during development. For Installation and/or updating of software involving transmission over network see T01-N02B1E. For network security software updates see T01-N02B3.	Bootup and program loading including version management, hot configuration
T01-J20	Change Scope	Software Development		Covers only Software programming techniques and production / compilation / debug aids. For Software implementations search T01-J, T01-N codes e.g. T01-J12B for windowing software, T01-N03B for Internet constructional software. For Program code patents see T01-S.	Covers only Software programming techniques and production / debug aids. For Software implementations search T01-J codes e.g. T01-J12B for windowing software and T01-J05B4 for database software. See T01-S for disclosure of software code.
T01-J20A	Change Scope	Programming Techniques		Includes functional, automatic, computer-generated, concurrent, sequential, object-oriented, procedural and network programming. For Object-based systems see T01-F07. For Object-oriented database see T01-J05B4C	Includes functional, automatic, computer-generated, concurrent, and sequential programming techniques; event-driven, logic programming, procedural, procedural/declarative and network programming.
T01-J20B	Change title/scope	Software Development Tools, Systems Analysis	Requirements/specifications, Tools and Techniques	Languages, methodologies, Development environment, Systems analysis	Includes languages, methodologies, decision tables, flowcharts, and software libraries. Structured, top-down, workbench, tools for system analysis and specification languages.
T01-J20B1	Change Scope	Software Development Kit	Application Programming Interface	Integrated Development Environment, Programming Tools. API for software development only. For use of API in program execution see T01-F05A, Program Compilers and Assemblers. Software source code libraries. For dynamic link libraries (DLLs) see T01-F05A	Code generators and visual programming tools, e.g. u
T01-J20B2	Change title/scope	Systems Analysis, Documentation	Software libraries and version management	Systems Analysis and Design, Specifications, Source code development version management. From 2007, for version management of other software e.g. BIOS, embedded software, application package, network security software see T01-F05B2, T01-N02B1E, T01-N02B3 as appropriate.	None
T01-J20B2A	Change Scope	Software registration, anti-piracy		For incorporation of Software registration and Anti-Piracy coding mechanisms at development stage of software. See T01-J20X before 1997. See T01-J05A2G, T01-N01A2G for Intellectual Property and Copyright management.	See T01-J20X prior to 1997
T01-J20C	Change title/scope	Software Test, Verification, Debug, Optimization	Program verification, Testing and Debug	Software test, verification and debug within and outwith Integrated Development Environment. Test data generation. Quality Assurance. Optimization of source code. Software simulation.	Includes assertion checkers, correctness proof, validation, dumps, test data generation and tracing. Software simulation. Quality Assurance.
T01-J20D	Change title/scope	Anti-Virus & Security program development	Virus protection	Development of Anti-Virus, Anti-Spyware programs. Analysis of Virus signatures. From 2007, see T01-N02B3 for applications of Anti-Virus software.	Includes Anti-Virus programs. Trojan Horse.
T01-J20X	Change Scope	Other Software details		For Software copyright protection see T01-J20B2 from 1997 - 2006, and T01-J20B2A from 2007.	See T01-J20B2 for copyright protection from '97
T01-N01A1	Change scope	EFT/banking		Includes Internet banking, billing, point of sale (POS) and metering, see T01-J05A1 and T01-H07C5E prior to 2002.	
T01-N01A2D	Change Scope	Virtual communities		Includes discussion forums and message posting. See T01-j05A together with T01-H07C5E prior to 2002.	
T01-N01A2E	Change Scope/Search term	Value chain service and Integrator		Includes logistics, production management, web based shipping support, web hosting and integrated on-line management.	
T01-N02B1E	Change Scope	Network operating system management		Management of network operating systems. Installation and/or updating of software involving transmission over network. For network security software updates see T01-N02B3.	Management of network operating systems. Installation and/or updating of software involving transmission over network.
T01-N02B3	Change Scope	Anti-Virus, Testing network vulnerability	Testing network vulnerability	Anti-Virus, Anti-Spyware Software applications. Testing server security and setting updates for security programs. For security program update via network transmission see T01-N02B1E. Before 2007 see T01-J20D for Anti-Virus software applications.	Covers testing server security and setting updates for security programs.
T03 Data recording					

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T03	Change Scope			This class covers dynamic recording systems, i.e. those based on relative movement between record carrier and transducer. Audio/video recording is coded in W04 also (but see notes below). Static stores per se are coded in U14 and computer storage systems using them in T01-H codes. Abstract storage systems (e.g. software for controlling storage) that do not contain any details of physical recording equipment, such as methods for backing up computer data, are covered in T01 and are not coded in T03. Bar-coding is covered in T04-A03B1.	This class covers dynamic recording systems, i.e. those based on relative movement between record carrier and transducer. Audio/video recording is coded in W04 also (but see notes below). Static stores per se are coded in U14 and computer storage systems using them in T01-H codes. Bar-coding is covered in T04-A03B1.
T03-A01A	Change Scope	Magnetic layers		Prior to 2007 all magnetic materials and films are also coded in V02-A01 and V02-B01 codes respectively. From 2007 V02-B01 has been discontinued while V02-A01 codes are only applied for magnetic materials of general application. Therefore V02 is no longer routinely assigned for magnetic recording media and heads with the exception of nanostructures, which are coded in V02-B04.	Magnetic materials and films are also coded in V02-A01 and V02-B01 codes respectively.
T03-A01A1A	Change Scope	Metal and alloy compositions		Prior to 2007 this topic is also coded in V02-A01A2. This topic is no longer coded V02.	Also coded in V02-A01A2.
T03-A01A1C	Change Scope			Includes ferrite materials. Prior to 2007 this topic is also coded in V02-A01B2.	Includes ferrite materials. Also coded in V02-A01B2.
T03-A02A	Change Scope	Applying magnetic film to substrate		Includes apparatus (with T03-A02D1) and methods for liquid deposition, sputtering, evaporation, and other techniques. Prior to 2007 see V02-H02 codes also for magnetic film application. Manufacturing processes other than magnetic layer deposition are covered by T03-A02B codes. (See note for T03-A02B8).	Includes apparatus (with T03-A02D1) and methods for liquid deposition, sputtering, evaporation, and other techniques. See V02-H02 codes also for magnetic film application. Manufacturing processes other than magnetic layer deposition are covered by T03-A02B codes. (See note for T03-A02B8).
T03-A02A1	Change Scope	Coating by liquid method, including plating		Prior to 2007 magnetic film deposition by plating is also coded in V02-H02C.	Magnetic film deposition by plating is also coded in V02-H02C.
T03-A02A3A	Change Scope	Sputtering		Prior to 2007 this topic is coded in V02-H02B as well. Sputtering apparatus of general application is also coded in X25-A04 and V05-F codes.	Also coded in V02-H02B. Sputtering apparatus of general application is also coded in X25-A04 and V05-F codes.
T03-A03	Change Scope	Heads		Prior to 2007 see also V02-A02 codes for magnetic materials. Prior to 2002 if audio/video application is indicated see also W04-B02A. For erase heads search with T03-A06E1. From 2002 heads for audio/visual recording are no longer coded in W04-B02. Audio/visual applications are indicated by W04-B10, W04-B12, W04-B14 and W04-B16 codes.	For magnetic materials see also V02-A02 codes. Prior to 2002 if audio/video application is indicated see also W04-B02A. For erase heads search with T03-A06E1. From 2002 heads for audio/visual recording are no longer coded in W04-B02. Audio/visual applications are indicated by W04-B10, W04-B12, W04-B14 and W04-B16 codes.
T03-A03C3	Change Scope	Using magnetoresistive material		All heads with thin film construction are additionally coded in T03-A03E. For biasing arrangements see T03-A03J9 also. Magnetoresistive elements used in non-head devices such as MRAM are coded in U12-B01B. Prior to 2007 thin film heads are also coded in V02-B03 but this code is now discontinued.	For biasing arrangements see T03-A03J9 also. Magnetoresistive elements in general are also coded in U12-B01B and, in the case of thin-film construction, T03-A03E and V02-B03 are also assigned.
T03-A03E	Change Scope	Thin film heads		Assumed to be for inductive type head structures unless applied in conjunction with T03-A03C codes. This code is intended for magnetic heads wholly of film-circuit type construction, i.e. including thin film coil windings (for details of which search with T03-A03J5). Magnetic heads in which only the core and related magnetic circuit components are of thin film construction are not included. Cores for such heads are covered by T03-A03J1C, and for thin film circuit type heads by T03-A03J1E. Metal-in-gap heads are covered by T03-A03F codes. Prior to 2007 magnetic film details of 'thin film' heads of both types are also coded in V02-B03, which has now been discontinued. For film circuits in general, see U14-H codes, which are not assigned for thin film magnetic heads.	This code is intended for magnetic heads wholly of film-circuit type construction, i.e. including thin film coil windings (for details of which search with T03-A03J5). Magnetic heads in which only the core and related magnetic circuit components are of thin film construction are not included. Cores for such heads are covered by T03-A03J1C, and for thin film circuit type heads by T03-A03J1E. Metal-in-gap heads are covered by T03-A03F codes. Magnetic film details of 'thin film' heads of both types are also coded in V02-B03. For film circuits in general, see U14-H codes, which are not assigned for thin film magnetic heads.
T03-A03J1A	Change Scope	Magnetic material composition		Prior to 2007 see also V02-A02 codes for further details of materials.	See also V02-A02 codes for further details of materials.
T03-A03J1C	Change Scope	Thin film core (for non-film head)		This code relates to magnetic heads with film-type cores, other parts of the head, such as windings, being of conventional construction. Prior to 2007 see also V02-B codes, especially V02-B03. From 2007 these codes are discontinued. Heads which are entirely of film circuit construction are covered by T03-A03E, their cores being covered by T03-A03J1E. Metal-in-gap heads are covered by T03-A03F codes.	This code relates to magnetic heads with film-type cores, other parts of the head, such as windings, being of conventional construction. See also V02-B codes, especially V02-B03. Heads which are entirely of film circuit construction are covered by T03-A03E, their cores being covered by T03-A03J1E. Metal-in-gap heads are covered by T03-A03F codes.
T03-A03J1E	Change Scope	Thin film head cores		This code is intended for core details of magnetic heads which are entirely of film circuit type construction, also coded in T03-A03E. See T03-A03J1C for magnetic film cores for otherwise conventional heads. (Prior to 2007 V02-B03 is also assigned for all aspects of thin magnetic films used for heads).	This code is intended for core details of magnetic heads which are entirely of film circuit type construction, also coded in T03-A03E. See T03-A03J1C for magnetic film cores for otherwise conventional heads. (V02-B03 is also assigned for all aspects of thin magnetic films used for heads).
T03-A03J3	Change Title	Carrier-interfacing surface	Carrier-contacting surface		
T03-A03J5	Change Scope	Windings		HF coils in general are covered by V02-F01 codes. Prior to 2007 HF coils for magnetic heads were also coded in V02-F05, which has now been discontinued.	See V02-F05 also. HF coils in general are covered by V02-F01 codes
T03-A04A	Change Scope	Manufacture, testing		Prior to 2007 see also V02-H codes and V02-H05. From 2007 manufacture and testing of magnetic heads is covered in T03 only.	See also V02-H codes and V02-H05 in general.

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T03-A05A1C	Change Scope	Track-following system, servo		See also T03-A05B1A for combined track accessing and following servo system, and T03-G02C1 for track following servos in general. For layout of servo tracks see T03-A06F codes. Details of physically separate servo tracks (magnetic and non-magnetic) created during formation of magnetic layer on carrier are covered in T03-A01G	See also T03-A05B1A for combined track accessing and following servo system, and T03-G02C1 for rackfollowing servos in general.
T03-A06F	Change Scope	Format		Covers signals recorded as magnetic information on carrier only. See T03-A01G codes for physical aspects of record carrier formatting, e.g. hard sectoring. See W04-B01A codes for formatting aspects relevant to audio/video recording.	See T03-A01G codes for physical aspects of record carrier formatting, e.g. hard sectoring. See W04-B01A codes for formatting aspects relevant to audio/videos recording.
T03-A08	Change Title/Scope	Magnetic drive	Record carrier drive system	Codes in this section are used with either T03-E or T03-F codes as appropriate to indicate carrier positioning aspects. Portable standalone drives are also coded in T04-P. Prior to 9701, these codes were used to indicate these aspects only, but are now widened in scope to be applied for any novel aspect of magnetic drives which would be included in T03. To further discriminate the type of equipment concerned, codes from the T03-N section should be used where T03-A08 codes are not sufficiently specific.	Codes in this section are used with either T03-E or T03-F codes as appropriate to indicate carrier positioning aspects. Prior to 9701, these codes were used to indicate these aspects only, but are now widened in scope to be applied for any novel aspect of magnetic drives which would be included in T03. To further discriminate the type of equipment concerned, codes from the T03-N section should be used where T03-A08 codes are not sufficiently specific.
T03-A08A1E	Change Title	Card type, small form factor magnetic disc drive	Card type magnetic disc drive	Covers compact and/or thin drive assumed to be of hard disc type unless other codes indicate otherwise.	Covers compact, thin drive assumed to be of hard disc type unless other codes indicate otherwise.
T03-B01D7	Change Scope	Non-erasable carrier		This code is only used when this aspect of the carrier is stated, and not merely instead of T03-B01D8. Search in conjunction with T03-B01D8 for hybrid carrier arrangements with erasable and non-erasable areas.	This code is only used when this aspect of the carrier is stated, and not merely instead of T03-B01D8.
T03-B01D8	Change Scope	Erasable and rewritable carrier		For details of recording layers see T03-B01B5L. Search in conjunction with T03-B01D7 for hybrid carrier arrangements with erasable and non-erasable areas.	For details of recording layers see T03-B01B5L.
T03-B01E3J	Change Scope	Applying coatings after pressing		Includes labelling where label is part of carrier (also coded in T03-H02A1A and X25-F08 when there are significant electrical details). Chiefly covers application of reflective and protective films after pressing process. T03-B01E1B will continue to be assigned (in addition to T03-B01E3J) where novel coating equipment is involved.	Includes labelling where label is part of carrier (also coded in T03-H02A1A). Chiefly covers application of reflective and protective films after pressing process. T03-B01E1B will continue to be assigned (in addition to T03-B01E3J) where novel coating equipment is involved.
T03-B01E3P	Change Scope	Packing and shipment		Includes placing CDs in 'jewel boxes' ('jewel boxes' per se and their manufacture are covered by T03-L01A1), labelling, etc. Electrical details of packing and labelling of carrier containers are also assigned X25-F codes.	Includes placing CDs in 'jewel boxes' ('jewel boxes' per se and their manufacture are covered by T03-L01A1), labelling, etc.
T03-B01F	Change Scope	Recording format		Covers physical aspects only such as groove/land structure and other aspects fixed at time of disc manufacture, as well as geometry of recordable and non-recordable pits. See T03-B05 for signal aspects of recording formats, including spacial arrangement of data on carrier and between carrier layers.	Covers physical aspects only, e.g. hard sectoring. See T03-B05 for signal aspects of recording formats.
T03-B01F5A	Change Scope	Relating to tracking		Track following and accessing is covered in T03-B02A3 codes, also assigned where appropriate.	Track following and accessing is covered in T03-B02A3 codes, also assigned where appropriate. Index signal recording and related aspects are also in T03-J01 codes.
T03-B02A8	Change Title/Scope	Using multiple heads, head positioning for double-sided disc	Head positioning for double-sided disc	From 2007 this code has been expanded to include multiple head systems not exclusively used for double-sided discs. Previously this code covered only head positioning for double-sided disc.	Includes dual-head systems and arrangements for single head to move to other side of disc.
T03-B05	Change Scope	Signal recording format and methods		Delete scope note	Covers arrangement of data only, physical aspects such as hard sectoring of data, are covered by T03-B01F.
T03-B05A	Change Scope	Recording methods		Includes arrangements for recording label information using data recording equipment on visible light sensitive layer. For this topic see also T03H02A.	
T03-B05F	Change Scope	Format		Covers arrangement of data only, physical aspects such as hard sectoring of data, are covered by T03-B01F. Index signal recording and related aspects are also in T03-J01 codes.	None
T03-B05F	Change Scope	Format			None
T03-B10	Change Scope	Optical drive		Portable standalone drives are also coded in T04-P. From 2005 optical drives are coded in this section in accordance with carrier type and are no longer assigned a corresponding T03-N code. Prior to 2002 optical drives are coded in T03-N as appropriate and W04-C10. From 2002 W04-C10 codes are applied only for audio/video recording applications and therefore between 2002 and 2005 optical drives with no audio/video aspect were assigned a T03-N code in conjunction with the appropriate T03-B codes to denote novel aspects.	From 2005 optical drives are coded in this section in accordance with carrier type and are no longer assigned a corresponding T03-N code. Prior to 2002 optical drives are coded in T03-N as appropriate and W04-C10. From 2002 W04-C10 codes are applied only for audio/video recording applications and therefore between 2002 and 2005 optical drives with no audio/video aspect were assigned a T03-N code in conjunction with the appropriate T03-B codes to denote novel aspects.
T03-B10A	Change search term	Disc drive			
T03-C01	Change Scope	Capacitive		Includes ferro-electric probe storage.	None

CODE (max. 10 chars incl. spaces)	REASON	NEW TITLE	CURRENT TITLE	NEW SCOPE NOTES	CURRENT SCOPE NOTES (only include if scope notes are to be changed)
T03-D01K	Change Scope	Magneto-optical drive		Portable standalone drives are also coded in T04-P. From 2005 magneto-optical drives are coded in this section in accordance with carrier type and are no longer assigned a corresponding T03-N code. Prior to 2002 magneto-optical drives are coded in T03-N as appropriate and W04-D20. From 2002 W04-D10 codes are applied only for audio/video recording applications and therefore between 2002 and 2005 optical drives with no audio/video aspect were assigned a T03-N code in conjunction with the appropriate T03-D01 codes to denote novel aspects.	From 2005 magneto-optical drives are coded in this section in accordance with carrier type and are no longer assigned a corresponding T03-N code. Prior to 2002 magneto-optical drives are coded in T03-N as appropriate and W04-D20. From 2002 W04-D10 codes are applied only for audio/video recording applications and therefore between 2002 and 2005 optical drives with no audio/video aspect were assigned a T03-N code in conjunction with the appropriate T03-D01 codes to denote novel aspects.
T03-F01A	Change Scope	Loading mechanism and drive		Includes disc tray	None
T03-H02A1A	Change Scope	Labels		Includes labels applied to carrier itself and to housing. e.g. cassette case, jewel box. For labelling during manufacture see T03-B01E codes and X25-F08 (if there are significant electrical details)/	Includes labels applied to carrier itself and to housing. e.g. cassette case, jewel box, etc..
T03-L01A1	Change Scope	For discs		Delete scope note	T03-N01 is also assigned.
T03-L01C1	Change Scope	For discs		Delete scope note	T03-N01 is also assigned.
T03-P01D	Change Title/Scope	Equalisation, thresholding and digital signal processing	Equalisation, thresholding and detection	Covers signal processing circuitry for detection and reading of signals. Can be used in conjunction with T03-A06C3 and T03-B06C for specific application to magnetic and optical recording respectively. See also U22-G codes for digital signal processing.	Covers circuitry for detection and reading of signals. Does not cover specific cases of magnetic and optical detection coded in T03-A06C3 and T03-B06C respectively.
T03-Q	Change Scope	Library systems		Covers systems for bulk storage of data, especially with automated retrieval.	Covers systems for bulk storage of data, especially with automated retrieval. For carrier handling aspects see also T03-E01B5 (cassettes) and T03-F01F5 (discs, when searched with T03-N01).

T04 Computer Peripheral Equipment

T04-D07F	Change Scope			For image recognition relating to fingerprint recognition. See T04-D04 only prior to 2006. See also t05-D01B for entry/exit registers based on human characteristics. See also S05-D01C5A were novel detection systems are included.	
T04-F	Change Title	Manual input arrangements for computers and computer controlled equipment		Only applied if input devices details are given. Covers manual or other physical input arrangements. See T01-C02 codes for interface to computer. Covers input for computer controlled devices, see W01 codes only for phones.	
T04-F01	Change title	Keyboards and keypads	Keyboards		
T04-G02E	Change scope note	Recording media		See also X25-T09A for electrical details of paper manufacture.	Recording pattern of LCD screen cross-reference to U11/U14.
T04-G02J	Change scope note	Applications of ink-jet printing technology		Covers printing on non-paperlike media, e.g. CD (see also T03). Includes textile printing (see also X25-T04D), 3-D printing and other industrial applications using inkjet technology. Manufacturing LCD screens and filters (see also U14).	Includes textile printing (see also X25-T), 3-D printing and other industrial applications using inkjet technology.
T04-G03	Change scope			For facsimile see W02-J02B1 also. Includes thermal ink compositions and heat sensitive paper and ribbons. For photothermographic see also T04-G04.	
T04-G11B	Change scope note	Recycling systems		See also S06-A17 for copier, and/or W02-J05D for facsimile. See also X25-W04 for electrical aspects of recycling systems in general.	See also S06-A17 codes for copier. See X25-W04 for recycling appt. in general.
T04-H	Change scope note			For signal processing aspects e.g. contrast control, white balance control etc. see also W03 codes.	
T04-H03D	Change Scope			See also X25-U04A.	
T04-H03E	Change scope note			See also W04-Q01 for novel projector details, projectors don't receive any other T04-H codes.	
T04-J01	Change title / scope note	Media feeding	Paper feeding	See T04-G06A for paper feeding in printer, T04-K02C1 for smart card feeding, and T04-A05 for card feeding.	
T04-K	Change scope note	Smart media e.g. cards incorporating integrated circuit memory etc.		Includes reading aspects. Constructional details are coded in U11/U14 as appropriate. See also under application (T05, W05, W06 or X25). For protective coatings see V04-R03E. See also X25-F08 if details of the actual attachment of the tag (e.g. RFID tag) to an item.	
T04-P	Change title / scope note	Drive for computer input	Disc drives for computer input	External drive unit, see also T03.	Separate disc drive unit
T04-X	change scope note	Miscellaneous		Includes card case/wallet (see also T03), office automation, cleaning appt. for computer peripherals, computer equipment for handicapped people (see also S05-K, and for Braille printer see also T04-G09), and maintenance equipment, shedder, electric stapler and general packaging specifically for office equipment.	

T06 Process and Machine Control

T06-D08F	Change title/scope/search	Trucks, goods or robotic vehicles	Goods conveying vehicles	Includes goods conveying vehicle control (see also X25-F05A codes).	See also X25-F05A.
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T07 Traffic Control Systems

T07-A05B	Change title/scope	Includes systems for monitoring position of taxis, e.g. to allow dispatcher to efficiently dispatch taxis to most appropriate pick-up points. See also T07-A05B for display of taxi position to controller, T07-A05C for display of pick-up point to taxi driver, and T07-A05D for informing passenger of current taxi location and expected arrival time. See X22-P05C and other appropriate X22 codes for on-board taxi details.		Includes informing central station of vehicle position, e.g. to allow controller to monitor vehicle progress and alter vehicle schedule if required (see also T07-A05S). See also X22-E06F for updating vehicle navigation display.	Includes informing central station of vehicle position. T07-A05A can also be applied if position of scheduled vehicle is being relayed to central controller.
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CODE (max. 10 chars incl. spaces)	REASON	NEW TITLE	CURRENT TITLE	NEW SCOPE NOTES	CURRENT SCOPE NOTES (only include if scope notes are to be changed)
T07-A05C	Change title/scope	Displaying information to driver		Includes arrangements indicating position of vehicle to driver, e.g. using roadside beacons or other roadside based navigational systems. Systems transmitting actual control signals affecting vehicle steering for example, are covered by T07-D01 (and X22-C05B for automatic steering details). See also X22-E06F and S02-B08 codes. Includes use of offboard traffic centre to inform driver of best route to destination, e.g. due to traffic congestion, i.e. to reduce processing requirements of on-board navigation system. T07-G01 may also need to be applied for indication of traffic congestion.	Includes arrangements indicating position of vehicle to driver, e.g. using roadside beacons or other roadside based navigational systems. Systems transmitting actual control signals affecting vehicle steering for example, are covered by T07-D (and X22-C05B for automatic steering details). See also X22-E06 and S02-B08 codes. Includes use of offboard traffic centre to inform driver of best route to destination, e.g. due to traffic congestion. T07-G01 may also need to be applied for indication of traffic congestion.

CODE (max. 10 chars incl. spaces)	REASON	NEW TITLE	CURRENT TITLE	NEW SCOPE NOTES	CURRENT SCOPE NOTES (only include if scope notes are to be changed)
Section U					
U11 Semiconductor Materials and Processes					
U11-A09	change scope		Other materials for semiconductor mfr	Includes resins not used as encapsulants or sealants.	
U11-A10	change scope		Abrasives, polishers, cleaners, etchants used in semiconductor mfr	Includes materials used in mechanical and/or chemical treatment. Resist strippers are also coded here. See also U11-C06A1, U11-C07A1, or U11-C07B as appropriate.	Includes materials used in mechanical and/or chemical treatment. See also U11-C06A1, U11-C07A1, or U11-C07B as appropriate.
U11-A15	change scope		Electroluminescent materials	Includes electroluminescent materials containing phosphors. For details regarding electroluminescent displays and devices (structure, circuits, manufacture) see U14-J codes.	For details regarding electroluminescent displays and devices (structure, circuits, manufacture) see U14-J codes.
U11-C01B	change scope		Chemical vapour deposition of semiconductor layer	For appts see U11-C09B and in case of plasma enhanced CVD and electron cyclotron resonance CVD, U11-C09C. Also includes reactive ion beam deposition and seeded crystallisation deposition techniques. Prior to 199201 for PECVD see U11-C01A9 and U11-C01B. Also cover Vapour phase epitaxy (VPE).	For appts see U11-C09B and in case of plasma enhanced CVD and electron cyclotron resonance CVD, U11-C09C. Also includes reactive ion beam deposition and seeded crystallisation deposition techniques. Prior to 199201 for PECVD see U11-C01A9 and U11-C01B.
U11-C03A	change scope		Heat, radiation, furnace treatment	Includes temperature control systems and apparatus for semiconductor mfr. Or substrate in vacuum processing appts. E.g. sputtering, CVD or etching appts. (see also appropriate codes in U11-C09). Electrical aspects of furnaces are covered by X25-C codes.	Includes temperature control systems for semiconductor mfr. Or substrate in vacuum processing appts. E.g. sputtering, CVD or etching appts. (see also appropriate codes in U11-C09). Electrical aspects of furnaces are covered by X25-C codes.
U11-C04C5	change title	Vibration control and compensation for microlithography	Vibration control apparatus for microlithography		
U11-C04D	change scope		Masking techniques for microlithography	Relates to lithographic structures on semiconductor or active layer. Until 200701 includes e.g. lift-off, sequences of masking and etching techniques to produce patterned structures on integrated circuit, and masking techniques used in non-microlithographic steps of semiconductor mfr. From 200701 see U11-C06C for all non-microlithographic masking, along with other relevant codes, e.g. U11-C05D3 for masking techniques applied to interconnection mfr., U11-C07D1 for masks used in etching fine details, U11-C18D and U14-K01A1C for masks used in optical filter mfr. for LCD, etc.	Includes e.g. lift-off, sequences of masking and etching techniques to produce patterned structures on integrated circuit, and masking techniques used in non-microlithographic steps of semiconductor mfr. Relates to lithographic structures on semiconductor or active layer. See also other relevant codes, e.g. U11-C05D3 for masking techniques applied to interconnection mfr., U11-C07D1 for masks used in etching fine details, U11-C18D and U14-K01A1C for masks used in optical filter mfr. for LCD, etc.
U11-C04K	change scope	Point to other C04 codes for type of exposure appt used, and A16 for fluids themselves	Immersion Lithography	Includes all apparatus and methods for exposure through a liquid. See other U11-C04 codes for type of exposure source used. For immersion fluid composition see U11-A16.	Includes all apparatus and methods for exposure through a liquid.
U11-C09	change scope		Sputtering, vapour deposition, plasma etc appts for semiconductor processing	From 199701 vacuum appts. for semiconductor processing is covered by U11-C09Q. For electrical details see also X25-A04 codes. For generic deposition process masks use appropriate U11-C09 code with U11-C06C, and for specific material deposition use U11-C06C with other U11-C codes.	From 199701 vacuum appts. for semiconductor processing is covered by U11-C09Q. For electrical details see also X25-A04 codes.
U11-C09B	change scope			For Plasma enhanced CVD appts., electron cyclotron resonance CVD appts see also U11-C09C. Also cover Vapour phase epitaxy (VPE) appts.	For Plasma enhanced CVD appts., electron cyclotron resonance CVD appts see also U11-C09C.
U11-C09E	change scope		Sintering/curing furnaces	Details of furnaces used for ceramic sintering, photoresist/other layer baking/drying, or encapsulant curing. For all other heating methods and equipments for semiconductor mfr see U11-C03A.	Details of furnaces used for ceramic sintering, photoresist/other layer baking/drying, or encapsulant curing.
U11-D01A7	change title	Low profile card type package for e.g. unencapsulated IC	Low profile card type package for unencapsulated IC		
U11-F01A	change title	Measuring material properties for semiconductor manufacture	Measuring active material properties for semiconductor manufacture		
U11-F01B2	change scope		Measuring using beam scanning	Includes measurements related to point defects, e.g. dust on wafer surface. For optical inspection in general see S03-E04 codes, In particular, S03-E04F codes cover optical techniques for flaw detection or contamination. For Electron beam microscopy see also U11-F01B4 and V05-F01 codes as appropriate. See also V05 codes for novel electron beam methods and appts aspects.	Includes measurements related to point defects, e.g. dust on wafer surface. For optical inspection in general see S03-E04 codes, In particular, S03-E04F codes cover optical techniques for flaw detection or contamination. For Electron beam microscopy see also U11-F01B4 and V05-F01 codes as appropriate.
U11-F02A1	change scope		Wafer holders and conveyers for storage, transport	Includes transfer from processing station to another. Also includes transfer and storage of LCD parts during LCD panel manufacture and assembly, also U14-K01A1K.	Includes transfer from processing station to another.
U13 Integrated Circuits					
U13-A01	change scope		IC radiation sensors, e.g. imagers characterised by detecting element	For complete manufacture see U11-C18B4. For Line image sensors (thin film) see U14-H01B. For CMOS image sensor structure and manufacture see also U13-D02A.	For complete manufacture see U11-C18B4. For Line image sensors (thin film) see U14-H01B.
U14 Memories, Film and Hybrid Circuits					
U14-A07A	change title/scope	Reading, sensing circuits		Includes reading methods, sense amplifiers and associated circuitry e.g. sense reference voltage generator, charge pump circuits for providing current to sense amplifiers.	Includes sense amplifiers and associated circuitry e.g. sense reference voltage generator, charge pump circuits for providing current to sense amplifiers
U14-A07A	change title	Manufacture for electroluminescent displays and device	Manufacture for electroluminescent displays		

CODE (max. 10 chars incl. spaces)	REASON	NEW TITLE	CURRENT TITLE	NEW SCOPE NOTES	CURRENT SCOPE NOTES (only include if scope notes are to be changed)
U14-E05A2	Change search terms				
U14-J03	change title	Circuits and drivers for electroluminescent devices	Changed from just display		
U14-K01A3	change scope		Circuits, drivers of LCDs	Includes mainly drive circuitry integral with LCD or circuitry which depends on specific characteristics of LCD., eg feedback control for detection of ambient light and control of light valve. More general aspects of drive circuitry are covered by T04-H03C2 or W03-A08B CODES. See also under application.	Includes mainly drive circuitry integral with LCD or circuitry which depends on specific characteristics of LCD. More general aspects of drive circuitry are covered by T04-H03C2 or W03-A08B CODES. See also under application.
U14-K01A4C	change scope		LCD Illumination arrangements	Includes internal and reflector type illumination. For backlighting see also W05-E05B and X26. See also X26 for backlight circuitry including ambient environment detection and feedback control.	Includes internal and reflector type illumination. For backlighting see also W05-E05B.
U14-K03	Change scope		Electrochromic displays	Includes materials, constructional details. For electro-static ball displays see appropriate W05-E08 codes.	Includes materials, constructional details.
U14-K09	change scope		other passive display	Includes electrically addressed electronic paper. For electronic paper in general see also appropriate W05-E08 codes.	
U21 Logic circuits, Electronic Switching and coding					
U21-A03B	Change scope/search term		A/D converters using D/A converter (feedback type)		Includes successive approximation type.
U21-A03B1	Change title/scope/search	Successive approximation type converters	SAR		
U21-C01T	Change title	Logic circuits using nanotubes	Nano tubes		
U21-C02A	Change title	Inter-family; logic level shifting	Inter-family		
U24 Amplifiers and Low Power Supplies					
U24-F03	Change scope	Smart protectors		Includes intelligent protectors, see also U13-E01 for IC protectors and relevant T01-J08 codes for microprocessor control.	See also U13-E01 for IC protectors
U24-G05A	Change scope			Includes cooling, mounting details, etc. See V04-T03 also.	None
U24-H05	Change scope	Power distribution over communication network		Includes power supply distribution, and its control, over a communication network such as a LAN. See also W01-A06 codes.	Includes power supply distribution, and its control, over a communication network such as a LAN.
U24-J	Change scope			Includes uninterruptible power supplies. See T01-L01B for computers, W01-A07K for data communications and W01-C07B for telephone systems.	See T01-L1 for computers, W01-C07B for telephone systems.
U25 Impedance Networks and Tuning					
U25-D03	Change Scope			Distributed-constant balanced-to-unbalanced converters are covered by W02-A02A5.	none
U25-D05	Change Scope			Distributed-constant impedance matching is covered by W02-A02A5.	none
Section V					
V01 Resistors and Capacitors					
V01-A02A	Change Scope		Thermistors	For temperature measurement application see V01-A02A7A and S03-B01F also. This code is intended for resistors using e.g. oxides of transition metals, and not linear TCR devices based on metallic conductors, for which S03-B01B is assigned, (although novel details of such resistances are assigned other V01 codes when appropriate).	
V02 Inductors and Transformers					
V02-F01G2	Change search term	HF coil			
V04 Printed Circuits and Connectors					
V04-A10	Change scope	Superconducting wires connection		For high power superconducting wire connectors, see X12-G02G.	Superconducting connections are also in X12-D06, X12-G01X
V04-Q04C	Change title/scope	Printed inductors; printed coils	Printed inductor	Also includes printed coils for transformers (see also V02-F/V02-G codes) and electric motors (see also V06-M08A1)	None
V04-T03C	Change search term				
V04-U	Change scope	Electric and magnetic screening		Normally includes screening arrangements for an individual equipment and the room containing the equipment. See S01-G08B5 also for screened rooms for electrical equipment testing. For individual measuring instrument screening, see S01-J02 also. For suppressing the emission of interference from an equipment by means of a specific constructional feature of the equipment, see also W02-H01E.	Normally includes individual appts. screening and also for rooms containing electronic equipment. See S01-G08B5 also for screened room for electrical equipment testing. For individual measuring instrument screening see S01-J02 also.
V05 Valves, Discharge Tubes and CRTs					
V05-L03C5	Change Title	Joining vessel parts, sealing, evacuating, filling, alignment	Joining vessel parts, sealing, evacuating, filling		
V05-L07D	Change Scope	Workpiece positioning		Covers positioning of workpiece with relation to manufacturing equipment.	none
V07 Fibre-Optics and Light Control					
V07-F01A3B	Change title	Materials for optical fibres and wave guides	Materials for optical Fibres		

CODE (max. 10 chars incl. spaces)	REASON	NEW TITLE	CURRENT TITLE	NEW SCOPE NOTES	CURRENT SCOPE NOTES (only include if scope notes are to be changed)
V07-N01	Change title/scope	Gyroscopes, interferometers, sensors	Gyroscopes, interferometers	Sensing using optical fibres. If novelty covers control of light, see also V07-K. Semiconductor laser light source for gyroscopes are also coded in U12-A01B1 and V08-A04A. Gyroscopes are also coded in S02-B07 and W06-A07; for interferometers see also S02-A03	If novelty covers control of light, see also V07-K. Semiconductor laser light source for gyroscopes are also coded in U12-A01B1 and V08-A04A. Gyroscopes are also coded in S02-B07 and W06-A07; for interferometers see also S02-A03

CODE (max. 10 chars incl. spaces)	REASON	NEW TITLE	CURRENT TITLE	NEW SCOPE NOTES	CURRENT SCOPE NOTES (only include if scope notes are to be changed)
Section W					
W01 Telephone and Data Transmission Systems					
W01-A06B8C	Change Scope	Peer-to-peer network		Prior to 2005, all aspects of peer-to-peer network were covered in W01-A06G3. See also T01-N02A2E for computer network aspects of peer-to-peer network.	See also T01-N02A2E for computer network aspects of peer-to-peer network.
W01-A06F2	Change Search Term	Network layer protocols			
W01-A06F2A	Change Search Term	IP			
W01-A06G3	Change Scope/Search	Network inter-connection		Covers communication conducted between a number of LANs using a MAC (media access control) to connect them through a bridge apparatus. Includes source routing and non-source routing; bridging of networks; and interconnect programs. See W01-A06E and T01 codes for network software in general. Also includes network interfacing. From 2005, all aspects of peer-to-peer network are covered in W01-A06B8C.	Covers communication conducted between a number of LANs using a MAC (media access control) to connect them through a bridge apparatus. Includes source routing and non-source routing; bridging of networks; and interconnect programs. See W01-A06E and T01 codes for network software in general. Also includes network interfacing.
W01-B02	Change Scope/Search	Indirect selection		This code is used for novel signal switches per se, including optical switching. See also V03 codes or U21-B codes as appropriate, e.g. U21-B05E. RF waveguide technology switches are covered by W02-A4A code.	This code is used for novel signal switches per se. See also V03 codes or U21-B codes as appropriate, e.g. U21-B05E. RF waveguide technology switches are covered by W02-A4A code.
W01-C01A2A	Change Scope	Back or edge lighting for telephone display		From 2007, these topics in general are covered by X26-U04A codes (now the main codes for backlighting and edge lighting) which are also assigned and in U14-K01A4C assuming LCD. Prior to 2006, W05-E05B codes (now discontinued) were assigned in this role. During 2006 W05-E05B codes were also assigned when wider applications were stated but were not used with W01-C01A2A for cases specific to telephone displays alone.	These topic in general are covered by W05-E05B codes (which from 2006 are not assigned in addition to this code unless other applications exist) and in U14, (e.g. U14-K01A4C, assuming LCD).
W01-C01B3C	Change Scope			Physical aspects of telephone display back- or edge-lighting, such as light sources, diffusers, etc. are covered by W01-C01A2A, and of displays in general by X26-U04A codes from 2007 (previously W05-E05B codes).	Physical aspects of telephone display back- or edge-lighting, such as light sources, diffusers, etc. are covered by W01-C01A2A, and of displays in general by W05-E05B codes
W01-C01G6G	Change Search Term	Data streaming and packet handling		This code is intended for telephone capable of data streaming and packet handling, e.g. for GPRS when used with W01-C01D3 codes.	
W01-C01P1	Change Scope		Multi Media apparatus	See also T01-J30 codes and W01-C05B2 for system aspects. Audio/video aspects of multimedia are covered by W04 codes which are also assigned as necessary.	See also T01-J30 codes and W01-C05B2 for system aspects. Audio/video aspects of multimedia are covered in W04-K10.
W01-C01P2	Change Title	Personal digital assistant	Personal digital organiser	See also T01-M06A1A and W01-C01D codes for mobile telephone aspects.	
W01-C01Q6	Change Title/Scope/Search	Multimedia processing aspects	Graphics and display processing	Covers processing aspects of the telephone, including graphics & display, audio, haptic & tactile and any general processing aspects.	Includes arrangements for processing graphical and display information that is not part of the display screen hardware. See also T01-C04D for computer display processing. Prior to 2006, all aspects of display/control circuitry were coded in W01-C01B3A.
W01-C02B7D	Change Scope	Short messaging service		Covers transmission of paging message to radio telephone. See W01-B05A1F for switching details, and W01-C01G6A for SMS telephone themselves. See W01-C02B7A for telephone exchange aspects of paging systems.	Covers transmission of paging message to radio telephone. See W01-B05A1F for switching details, and W01-C01G6A for SMS telephone themselves. See W01-C02B7A for telephone exchange aspects of paging systems.
W01-C05B3J	Change Search Term	Data streaming		Telephone sets (as opposed to systems) with data streaming capability are covered by W01-C01G6G from 2002.	
W01-C05B5G	Change Title/Scope	Advertising and marketing	Advertising	Covers transmission of advertising, promotional and marketing information to telephone users. Visual advertising in general is covered by W05-E03 codes, which are also assigned as appropriate. See T01-N01A2C for transmission of advertising and marketing information in computer networks.	Covers transmission of advertising and promotional information to telephone users. Visual advertising in general is covered by W05-E03 codes, which are also assigned as appropriate. See T01-N01A2C for transmission of advertising information in computer networks.
W02 Broadcasting, Radio and Line Transmission Systems					
W02-A01A3	Change Scope			See appropriate U14 codes for microstrip technology relevant to film circuits, e.g. U14-H03C2 codes for analogue circuitry, and V04-Q codes for printed circuit details.	See appropriate U14 codes for microstrip technology
W02-A02B1A	Change Scope			Includes couplers consisting of two coupled guides, being either hollow waveguides or arranged in parallel or being coaxial, stripline or microstrip. See W02-A01 codes for claimed waveguide transmission lines, and V04-Q codes for printed circuit details.	Includes couplers consisting of two coupled guides, being either hollow waveguides or arranged in parallel or being coaxial, stripline or microstrip. See W02-A01 for claimed waveguide transmission lines.
W02-A02C	Change Scope			Lumped constant impedance matching is covered by U25 codes.	none
W02-B01A	Change Scope			Includes circular loops and also rectangular, delta and similar shapes. Parasitic arrays formed from such elements (i.e. 'quad' or 'box kite' antennas) are covered by W02-B04D5. Folded dipole antennas are covered by B01B1A or W02-B01B2A. Includes loop conductor antennas for smart cards, which are also assigned T04-K01C and V04-Q codes for printed circuit details.	Includes circular loops and also rectangular, delta and similar shapes. Parasitic arrays formed from such elements (i.e. 'quad' or 'box kite' antennas) are covered by W02-B04D5. Folded dipole antennas are covered by B01B1A or W02-B01B2A.
W02-B02A	Change Scope			Printed circuit antennas are covered by W02-B07A3 and V04-Q codes	Printed circuit antennas are covered by W02-B07A3 codes.
W02-B03D	Change Scope			Search with W06-A04X for radar signature reduction using absorbers. RF shielding is covered by V04-U codes.	Search with W06-A04X for radar signature reduction using absorbers.

CODE (max. 10 chars incl. spaces)	REASON	NEW TITLE	CURRENT TITLE	NEW SCOPE NOTES	CURRENT SCOPE NOTES (only include if scope notes are to be changed)
W02-B07D	Change Scope			Covers only the novel mounting aspects of the antenna. Use with appropriate W02-B08F and e.g. W06 or X22 codes for specific applications. Details of the actual antenna will also be coded as usual in the appropriate W02-B section.	Covers only the novel mounting aspects of the antenna. Use with appropriate W02-B08F code for specific applications. Details of the actual antenna will also be coded as usual in the appropriate W02-B section.
W02-C01A3	Change Scope			See also under application e.g. W05-D06P for remote control aspects, X12-H03 for power line carrier systems and W01-A06C6 for data communication network aspects.	See also under application e.g. W05-D06P for remote control aspects and X12-H03 for power line carrier systems.
W02-C01B1	Change Scope			Includes setting of transmission level, i.e. power control, and control of transmission direction. Systems aspects of power control in radio communication are covered by W02-C03E3.	None
W02-C01B2B	Change Scope			See U22-G03E3C for digital signal processing aspects of equalising.	none
W02-C03A5	Change Search Term				
W02-C03E1B	Change Scope			See U22-G03E3C for digital signal processing aspects of equalising.	none
W02-C04A1A	Change Scope	Modulator		See also V07-K codes for optical modulators in general and V08 codes for laser source modulators.	None
W02-C04A1D	Change Scope	Source		Semiconductor lasers are also assigned U12-A01B codes and V08-A04A codes.	See U12 and U12/V08 codes for LED and laser details.
W02-C04A3B	Change Scope	Amplifier, input stage		Includes circuit for photodiode and the like, also assigned U12-A02B4.	Includes circuit for e.g. photodiode.
W02-C04A7G	Change Scope	Diversity and polarisation control arrangements		Includes polarisation diversity aspects. Control of polarisation in general (for communications and analogous purpose) is covered by V07-K03 and V07-F02B for gratings, filters and polarisers.	Includes polarisation diversity aspects. Control of polarisation in general (for communications and analogous purpose) is covered by V07-K03.
W02-C04A7J	Change Scope	Dispersion compensation		This code is intended to cover apparatus or methods for the compensation of dispersion arising from e.g. optical fiber characteristics. (Previously covered in W02-C04A7 and W02-C04A7A). V07-K codes are also assigned as appropriate. Optical transmission systems using signals with an inherent resistance to dispersion, e.g. solitons, are covered by W02-C04B7.	This code is intended to cover apparatus or methods for the compensation of dispersion arising from e.g. optical fiber characteristics. (Previously covered in W02-C04A7 and W02-C04A7A). Optical transmission systems using signals with an inherent resistance to dispersion, e.g. solitons, are covered by W02-C04B7.
W02-C04B1A	Change Scope	With coherent light i.e. laser source		Novel laser sources are assigned W02-C04A1D in conjunction with appropriate U12-A01B codes and V08-A codes.	None
W02-C04B4B	Change Scope	With optical multiplexing		Includes WDM, also coded in W01-A03E1 when data transmission aspects are significant. See W02-K04 and V07 codes, e.g. V07-K04, also for novel aspects of optical multiplexing.	Includes WDM. See W02-K04 codes and V07-K04 also for novel aspects of optical multiplexing.
W02-D05C	Change Scope	Digital broadcast system		For broadcasting (not necessarily for entertainment purposes) in cellular telephone or data networks see W01-B05A1M and W01-A06E1A respectively.	None
W02-F01	Change Scope	Closed circuit		The definition of 'closed circuit' intended here is that images are transmitted, usually to a single location, for viewing by humans, i.e. camera systems providing a video signal for image analysis only are not included, being covered by e.g. T04-D07 codes. Novel aspects of video cameras are also assigned W04-M01 codes.	The definition of 'closed circuit' intended here is that images are transmitted, usually to a single location, for viewing by humans.
W02-F01A5	Change Scope	Combined with alarm or surveillance system		See also T01 and T04 image analysis codes and W05-B codes, e.g. W05-B01C5 codes for intruder detection, W05-B02 codes for fire detection and monitoring aspects.	See also W05-B codes, e.g. W05-B01C5 codes for intruder detection, W05-B02 codes for fire detection and monitoring aspects.
W02-F03A9	Change Scope			Includes hardware aspects such as connectors (see V04 codes also), cable installations and fittings (see W01-D codes also) and repeaters (also assigned W02-C01E and W02-C04A5 codes as appropriate)	None
W02-F05C	Change Scope			Includes transmission of information for station ID or VPS, ghost control reference signals, URLs and the like. See W04-E04C5 codes for recording equipment aspects of off-air programming and W03-A04G for TV receiver ghost-cancelling circuitry. Teletext transmission systems for digital and analog TV broadcasting are covered in W02-F05B5.	Includes transmission of information for station ID or VPS, and also ghost control reference signals. See W04-E04C5 codes for recording equipment aspects of off-air programming and W03-A04G for TV receiver ghost-cancelling circuitry.
W02-F07M1	Change Scope			Includes DVB and similar systems. TV receivers for signals in this format are covered by W03-A11G. Includes non-interactive broadcasting of video via the internet, e.g. by streaming. Interactive broadcasting via the internet in general is covered by W02-F10E3.	Includes DVB and similar systems. TV receivers for signals in this format are covered by W03-A11G.
W02-F10E3	Change Scope			This code is intended for interactive broadcasting using the internet itself. Non-interactive internet radio is covered by W02-D05C5 and non-interactive transmission of video via the internet is included in W02-F07M1.	This code is intended for interactive broadcasting using the internet itself. Non-interactive internet radio is covered by W02-D05C5.
W02-F10J	Change Scope			Includes monetary transaction and interactive shopping, also assigned T01-N01A1 or T01-N01A2 codes as appropriate for applications of computing.	None
W02-H01J5	Change Scope			This code is intended to cover interference avoidance during normal network operation, and includes channel allocation which is also assigned W02-C03E7. Avoidance of interference at a network design stage is covered by W02-H01J1, and avoidance of interference by changing frequency, e.g. of a clock signal, in equipment is covered by W02-H01G5.	This code is intended to cover interference avoidance during normal network operation, and includes channel allocation. Avoidance of interference at a network design stage is covered by W02-H01J1.
W02-J05B	Change title/scope notes	Finishing apparatus	Stapling, binding of output sheets.		
W02-L01	Change Scope			Jamming/anti-jamming for radar is covered by W06-A04E1 codes only and for GPS by W06-A03A5M only.	Jamming/anti-jamming for radar is covered by W06-A04E1 codes only.

W03 TV and Broadcast Radio Receivers

CODE (max. 10 chars incl. spaces)	REASON	NEW TITLE	CURRENT TITLE	NEW SCOPE NOTES	CURRENT SCOPE NOTES (only include if scope notes are to be changed)
W03	Change Scope			This class covers general audio/video equipment for entertainment purposes, including interconnection aspects, and radio receivers of broadcast type. Prior to 2007 displays for non-TV receiver applications and associated signal processing circuitry were not coded in W03-A ('TV receivers') being covered under T04 (for computer monitors), W05 (general display details). From 2007, due to the increasing convergence of TV and general purpose displays all relevant aspects of video displays will be coded in W03, including: signal processing (W03-A04 and W03-A05 codes); synchronising (W03-A06 codes); power supplies (W03-A07 codes); display aspects (W03-A08 codes); constructional details (W03-A09 codes); stereoscopic aspects (W03-A12 codes); and audio details (W03-A15 codes). Please note that W03 only covers displays capable of presenting video information. For displays of a general nature (e.g. segment displays), or where there is no particular emphasis on displaying video information (e.g. public information displays) see W05-E codes (W05-E05G for details of construction).	This class covers general audio/video equipment for entertainment purposes, including interconnection aspects, and radio receivers of broadcast type. Radio receivers of communications or unspecified type are covered by W02-G03 codes, but note that in addition to appropriate W03 codes, the topic of broadcast TV or radio receiver noise reduction is assigned W02-G03B codes, and from 2005, received signal strength indicating circuits and their applications are also assigned W02-G03J codes. Audio and video recording equipment per se is covered in class W04.
W03-A02B	Change Title	Bandscanning, channel switching and channel number storage			
W03-A08B	Change Scope	Liquid crystal display		LCDs per se are covered by U14-K01 codes. Drive circuitry integral with LCD is coded in U14-K01A3. From 2007 backlighting and analogous arrangements are coded in X26-U04A.	LCDs per se are covered by U14-K01 codes. Drive circuitry integral with LCD is coded in U14-K01A3.
W03-A12A	Change Scope	Stereoscopic and three-dimensional display TV receiver		Covers all aspects of stereoscopic TV receivers, such as decoding circuitry and display aspects (see W03-A08 codes also, e.g. W03-A08E7), including 3-dimensional displays. Also includes displays which can present different programme images when viewed from different angles	Covers all aspects of stereoscopic TV receivers, such as decoding circuitry and display aspects (see W03-A08 codes also, e.g. W03-A08E7), including 3-dimensional displays.
W03-A16C5	Change Title	Interactive TV aspects	Network interfacing aspects		
W03-A18A5C	Change Title/Scope	Time programming, channel and programme guide control with learning function	Time programming with learning function	This code covers automatic time programming arrangements based on learned user preferences, e.g. through monitoring of manual time programming operations or manual channel selection. For analogous arrangements for programming of video recorders see W04-E04C7 along with other relevant W04 recording equipment codes.	This code covers automatic time programming arrangements based on learned user preferences, e.g. through monitoring of manual time programming operations or manual channel selection. For analogous arrangements for programming of video recorders (VCRs) see W04-B10C and W04-E04C7.
W03-G05G	Change Title	General AV equipment operation display	General AV equipment display		
W04 Audio/ Visual Recording and Systems					
W04	Change Scope	Audio/visual recording and systems		Prior to 2002 this class covered all aspects of audio/visual recording and reproduction (covered chiefly by W04-A to W04-L codes). Signal processing aspects were generally coded in W04 only while details of record carriers and head-carrier drive systems were coded in both T03 (Data recording) and W04. From 2002, with the exception of mechanical recording methods (W04-A), W04 will only cover applications, formatting, signal processing and constructional aspects specific to audio/visual recording. All carrier and mechanical aspects of recording and reproduction are coded in T03 only. Accordingly from 2002 a large number of codes in W04-B, W04-C, W04-D, W04-E, and W04-L have been discontinued. Additionally, from 2006 a number of general aspects of audio-video equipment are covered in W03-G, such as manufacturing, recycling and packaging in W03-G10 and portable equipment in W03-G04. As well as the above, W04 covers the following material:- (1) General audio signal processing and sound mixing (W04-G codes) (2) Video cameras, TV studio and special effects equipment (W04-M/N codes) (3) General video signal processing (W04-P codes) (4) Projection TV and analogous systems (W04-Q codes) (5) Stereophonic systems, loudspeaker enclosures, public address (W04-R/S/T codes) (6) Electronic musical instruments (W04-U codes) (7) Sound analysis, synthesis, speech coding, audio coding, and antiphase sound cancelling (W04-V codes) (8) Educational and sports equipment, games, amusements (W04-W/X codes)	Prior to 2002 this class covered all aspects of audio/visual recording and reproduction, (covered chiefly by W04-A to W04-L codes). From 2002, with the exception of mechanical recording methods (W04-A), W04 will only cover applications, formatting, signal processing and constructional aspects specific to audio/visual recording. All carrier and mechanical aspects of recording and reproduction are coded in T03 ('Data recording'). Accordingly from 2002 a large number of codes in W04-B, W04-C, W04-D, W04-E, and W04-L have been discontinued. In addition to the above, W04 covers the following material:- (1) General audio signal processing and sound mixing (W04-G codes) (2) Video cameras, TV studio and special effects equipment (W04-M/N codes) (3) General video signal processing (W04-P codes) (4) Projection TV and analogous systems (W04-Q codes) (5) Stereophonic systems, loudspeaker enclosures, public address (W04-R/S/T codes) (6) Electronic musical instruments (W04-U codes) (7) Sound analysis, synthesis, speech coding, audio coding, and antiphase sound cancelling (W04-V codes) (8) Educational and sports equipment, games, amusements (W04-W/X codes) (9) Audio and video aspects of multimedia (10) Hearing aids (W04-Y codes) Prior to 2002, signal processing aspects of audio and video recording were generally coded in W04 only,
W04-C01A	Change Scope	Record carriers*		From 2002 this code is no longer used, the subject matter being covered in T03-B01 only. W04-C01A to W04-C01E remain valid and fully searchable for records prior to 2002.	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.

CODE (max. 10 chars incl. spaces)	REASON	NEW TITLE	CURRENT TITLE	NEW SCOPE NOTES	CURRENT SCOPE NOTES (only include if scope notes are to be changed)
W04-C05	Change scope	Signal recording format and methods		From 2002 this coded is only used for recording formats and methods specific to audio/video. General optical recording formats and methods are coded in T03-B05. Covers arrangement of data only, physical aspects such as hard sectoring of data, are covered by T03-B01F from 2007. Prior to 2007 this topic was coded in W04-C01F.	From 2002 this coded is only used for recording formats and methods specific to audio/video. General optical recording formats and methods are coded in T03-B05. Covers arrangement of data only, physical aspects such as hard sectoring of data, are covered by W04-C01F.
W04-E20V	Change Title	Time shift recording	Delayed recording		
W04-G01	Change Title	General audio recording and audio processing for recording	Audio processing for recording		
W04-G05	Change Title	Sound mixing and switching	Sound mixing		
W04-H05A	Change Scope	Dubbing		Delete scope note	See W04-B01C for re-recording on magnetic carriers.
W04-M01	Change Scope	Video cameras		Electrical aspects of photographic cameras are covered by S06-B codes. Features common to both photographic and video cameras are coded in both sections. Novel imaging and camera aspects of endoscopes are included here. See also S05-D codes and W02-F01M for this topic.	Electrical aspects of photographic cameras are covered by S06-B codes. Features common to both photographic and video cameras are coded in both sections.
W04-M01C1A	Change Scope	Lenses per se		Includes single lens and lens groups e.g. zoom lenses. Search with W04-M01B5 for lens or lens array integral with image pick-up element. See V07 for lenses with electrically-controlled variable parameters	Includes single lens and lens groups e.g. zoom lenses. Search with W04-M01B5 for lens or lens array integral with image pick-up element.
W04-M01D6	Change Scope	Image processing and function control		Used with W04-P and W04-N codes as appropriate, e.g. W04-P01D1 for white balance control, W04-N05C5E for red-eye removal (see T04-D07F1A for eye detection).	None
W04-M01E1A	Change Scope	IR-sensitive pick-up device		See also appropriate code for solid-state pick-up element, e.g. U14-E01, or U13-A codes	See also appropriate code for solid-state pick-up element e.g U14-E01 codes.
W04-Q01	Change Title/Scope	Video projection	Projection TV	For projection TV receivers search with W03 codes. Also covers details of projection displays for computers, which are also coded in T04-H03E. Includes systems of general application and also headup displays projecting video information, which are covered by W04-Q01K. From 2002 W04-Q01L is introduced covering the topic of direct retinal projection.	For projection TV receivers search W03 codes also. Includes systems of general application and also headup displays, which are covered by W04-Q01K. From 2002 W04-Q01L is introduced covering the topic of direct retinal projection.
W04-Q01E5	Change Title/Scope	Reflection systems	Mirror systems	Includes static mirrors and prisms. Optomechanical and electro-reflective scanning systems are covered in W04-Q01-E07S	None
W04-Q01E7	Change Title	Beam splitter, polariser and other optical arrangements	Other optical arrangements		
W04-Q01E7C	Change Title/Scope	Polarising, diffraction gratings, polarising filters		Prior to 2007 polarisation filters are covered in W04-Q01E3.	Polarisation filters are covered in W04-Q01E3.
W04-R05	Change Scope			Parametric audio systems are covered in W04-S05P and are not coded here.	None
W04-S05P	Change Scope	Parametric Audio systems		Covers use of separate ultrasound sources providing highly directional beams that interfere at precise location. Includes non-PA system applications.	Covers use of separate ultrasound sources providing highly directional beams that interfere at precise location.
W04-V	Change Title/Scope	Analysis, synthesis and processing of sound waves	Analysis, synthesis of sound waves	Includes acoustic noise reduction system using antiphase sound, which is covered by W04-V07 codes. Novel aspects of speech recognition or synthesis are respectively assigned W04-V01 and W04-V02. Inventions involving the use of these techniques only, without any novelty being involved, are covered by W04-V04 codes. General audio-video signal processing aspects, including sound mixing and switching are covered in W04-G.	Includes acoustic noise reduction system using antiphase sound, which is covered by W04-V07 codes. Novel aspects of speech recognition or synthesis are respectively assigned W04-V01 and W04-V02. Inventions involving the use of these techniques only, without any novelty being involved, are covered by W04-V04 codes.
W04-V04A5	Change Title	Voice-actuated control of equipment or machines	Machine control		
W04-X01A1	Change Scope	Performance monitors		For medical and physiological parameter monitoring using telephone see W01-C01P8 as well.	None
W04-X01E	Change scope	Sports equipment per se		Covers equipment used by player. Includes fishing rods, bats and skis as well as electrical aspects of hunting rifles and paintball guns. For electrical aspects of firearms see W07 as well. Also includes walking sticks for hiking (see X27-A02E as well).	Covers equipment used by player. Includes fishing rods, bats and skis.
W04-X02C	Change Scope	Video games		For 'arcade' game aspect search with W04-X02A. For control of visual display units see T04-H and W03 codes also. For manual control arrangements, such as joystick, see T04-F codes and for computer aspects, including networked games, see T01 -J and T01-N codes.	For 'arcade' game aspect search with W04-X02A. For control of visual display units see T04-H codes also. For manual control arrangements, such as joystick, see T04-F codes also, e.g. T04-F02B3, and for computer aspects see T01 codes, e.g. T01-J30B for computer games.

W05 Alarms, Signalling, Telemetry and Telecontrol

W05-A05	Change Scope	Electromagnetic transmission; pagers		These codes relate to the use of an EM transmission medium to convey an alerting signal, rather than the form of the alerting signal once received. To discriminate this aspect other W05-A codes should be used in conjunction with W05-A05 codes if necessary.	These codes relate to the use of an EM transmission medium to convey an alerting signal, rather than the form of the alerting signal once received. To discriminate this aspect other W05-A codes should be used in conjunction with W05-A05 codes.
W05-D02	Change Search Term	Multiplex systems and multiple access			
W05-D02A	Change Search Term	Time division			
W05-D02C	Change Search Term	Frequency division			

CODE (max. 10 chars incl. spaces)	REASON	NEW TITLE	CURRENT TITLE	NEW SCOPE NOTES	CURRENT SCOPE NOTES (only include if scope notes are to be changed)
W05-D05C	Change Scope	Testing/monitoring of system		Includes setting up and commissioning. See W02-C01D codes for line system testing, W02-C04C1 codes for optical system testing, and W02-C05 codes for monitoring of transmission systems in general. S01 codes may also be assigned for specific electrical testing.	See W02-C01D codes for line system testing, W02-C04C1 codes for optical system testing, and W02-C05 codes for monitoring of transmission systems in general. S01 codes may also be assigned for specific electrical testing.
W05-E	Change Scope			W05-E codes include, in general, display aspects not catered for elsewhere and for specific applications and device technology relevant codes in other classes should be considered, such as T04 codes for computer monitors and W03 codes for television displays. However, note that from 2007, certain W03-A codes (nominally for TV receivers) are used in a general sense for application to displays capable of presenting video information. (See the note at the start of W03 class for further details). Therefore, those searching with W05-E codes are advised to also consider use of W03-A codes for equipment capable of video display where that aspect is significant. From 2007 W05-E10 is introduced for 'electronic paper'.	Includes, in general, display aspects not catered for elsewhere. See relevant codes for specific applications and device technology. VDUs are in T04, television displays in W03.
W05-E05	Change Scope			W05-E05 codes may be used alone, in conjunction with other W05-E codes or to highlight display aspects in conjunction with other classes. Note that from 2007, provision has been made to use W03-A codes (nominally for TV receivers) in a wider sense for displays capable of presenting video, thus the use of W03-A codes in a search in addition to W05-E05 codes should be considered for such displays.	Used alone or in conjunction with W05-E01 to W05-E03 codes as appropriate.
W05-E05A	Change Scope			From 2007, filters specifically for video displays are covered by W03-A08E1. W05-E05A will continue to be assigned to general or non-video cases.	none
W05-E05G	Change Scope			This code is used with other W05-E codes or alone, as appropriate. It is not assigned for single applications covered elsewhere, such as for construction of a TV set display. From 2007, constructional details specific to video displays are covered by W03-A09 codes. W05-E05G will continue to be assigned to general or non-video cases.	This code is used with other W05-E codes or alone, as appropriate. It is not assigned for single applications covered elsewhere, such as for construction of a TV set display.
W05-E08	Change Scope	Display technologies not covered elsewhere		This code is intended for electrical displays not covered elsewhere, and is normally used with codes from other sections as appropriate, e.g. with S06-A codes for electrophotographic displays. Specific display technologies such as EL, LED, LCD, PDP, CRT are not included, and are covered in U12, U14, or V05 as appropriate. Novel technology aspects of electronic paper which cannot be coded elsewhere are covered here, and from 2007 W05-E10 is also assigned.	This code is intended for electrical displays not covered elsewhere, and is normally used with codes from other sections as appropriate, e.g. with S06-A codes for electrophotographic displays. Specific display technologies such as EL, LED, LCD, PDP, CRT are not included, and are covered in U12, U14, or V05 as appropriate.

W06 Aviation, Marine and Radar Systems

W06-A03A5R	Change scope			Includes novel hand-held or vehicle-borne GPS receiver. This code is normally applied when there is some novelty in the receiver construction itself such as a novel housing or display. For general use of a GPS receiver for position fixing, see W06-A03A5C instead.	Includes novel hand-held or vehicle-borne GPS receiver.
W06-A07	Change title/scope	Gyroscopes; Inertial navigation systems		From 200701 this code has been expanded to include inertial navigation systems (INS) using e.g. on-board linear accelerometers and rate gyroscopes to determine position/altitude of e.g. missile (see also W07 codes). Includes electrical aspects of gyroscopes used for navigational applications. Includes laser types (see V07 and V08 also). Non-electrical and non-electro-optical types are coded in S02-B07 only.	
W06-B01A1C	Change scope			Includes control of gas turbine jet engines such as turboprop, turbofan, turboshaft, RAMjet, SCRAM jet engines and pulse detonation engines. Also includes control of small gas turbines used as auxiliary power units (APUs) e.g. to generate power when aircraft is on the ground (see also X11-C01 for gas turbine driven electricity generation plant).	Includes control of gas turbine jet engines such as turboprop, turbofan, turboshaft, RAMjet and SCRAM jet engines.
W06-C01B1	Change scope			See X25-N02 and W06-A05D1 for fish locating using sonar. See W06-A03A5 and S02-B08 codes for GPS navigation per se. See W04-X01D for sports fishing.	See X25-N02 and W06-A05A for fish locating using sonar. See W06-A03A5 and S02-B08 codes for GPS navigation per se.

W07 Electrical Military Equipment and Weapons

W07	Change scope	Electrical Military Equipment and Weapons		Includes all electrical aspects of firearms used for military, law enforcement, hunting and sports purposes. See also W04-X01 codes for sports equipment per se. Electrical aspects of paintball guns are included in W04-X01E only. For nail guns see X25-A03D instead.	See W04-X01 codes for analogous equipment (e.g. for sports) corresponding to W07-B and W07-D codes.
W07-E08	Change scope			Includes stun guns and electrical aspects of other non-lethal weapons. Also see W07-F codes for self-defence systems. Also includes electromagnetic weapons or EMP (electromagnetic pulse) weapons for disabling electronic circuitry in hostile weapons systems or degrading explosives.	Includes stun guns and electrical aspects of other non-lethal weapons. Also see W07-F codes for self-defence systems.
W07-F03	Change scope			Includes launching of countermeasures to protect aircraft from seeker missile or use of laser to confuse IR sensor on hostile missile. See also W06-A04E1 codes and W06-A06C8 respectively for radar and lidar jamming and countermeasures.	Includes launching of countermeasures to protect aircraft from seeker missile. See also W06-A04E1 codes for radar jamming and countermeasures.

CODE (max. 10 chars incl. spaces)	REASON	NEW TITLE	CURRENT TITLE	NEW SCOPE NOTES	CURRENT SCOPE NOTES (only include if scope notes are to be changed)
Section X					
X12 Power Distribution/ Components/ Converters					
X12-C02B	Change scope			Constructional details of controllers are also included here. Includes for example moving a slider along a winding, etc to vary the output.	Automatic control of transformer/reactor voltage or current is in X13-G04. Constructional details of controllers are included here.
X12-D02	Change title	Non-insulated conductors; conductive films and structures	Non-insulated conductors		
X12-D03C	Change title/scope	Cable markings and heat protection	Heat dissipation, shielding or conduction. Cable markings	For flame retardants, see also X12-D03X for records prior to 1992.	
X12-D07E	Change scope			Includes manufacture and testing of non-insulated conductors. Other cable testing aspects are covered by X12-D07F.	none
X12-E04	Change scope	Manufacture		Also includes electrical and mechanical testing of insulators. See also S01-G codes for electrical tests.	Includes testing. See S01-G codes also for electrical tests.
X12-G01D	Change scope			Includes the use of unmanned vehicles, e.g. radio controlled helicopter for inspecting overhead transmission lines (see also W06-B15U), cleaning of insulators, de-icers, etc.	Includes cleaning of insulators, de-icers, etc.
X12-G02X	Change scope	Other cable/line connectors or fittings		Includes connectors or fittings for gas- or oil-filled cables.	Includes connectors or fittings for gas-, oil-, or superconducting-cables.
X12-G09	Change search term	Other general cable/line installation aspects			
X12-H03A1	Change scope	Economics-driven inter-tie or multi-source control		Includes control of network power transfer based on generation costs and tariffs offered for buying and selling of energy. Also includes provision for considering pollution-related costs and setting off of pollution credits. See also X12-H07 and T01-J codes.	Includes control of network power transfer based on tariffs offered for buying and selling of energy. See also X12-H07 and T01-J codes.
X12-H07	Change scope	Power trading across separate networks/generators		Includes computerised trading of power based on varying tariffs and pollution costs and credits. See also T01-J codes. To be used with other X12-H03 codes for communication and control aspects.	Includes computerised trading of power based on varying tariffs. See also T01-J codes. To be used with other X12-H03 codes for the communication and control aspects.
X21 Electric Vehicles					
X21-A01D	Change scope			Includes vehicles utilising electric traction motor and other power source, i.e. internal combustion engine. Can be used in conjunction with other X21-A01 codes such as X21-A01H for hybrid bus.	Includes vehicles utilising electric traction motor and other power source, i.e. internal combustion engine.
X21-A01D1	Change scope			Includes vehicle whose wheels are driven by both electric motor and e.g. internal combustion engine, including four wheel drive type vehicles where IC engine drives front wheels and electric motor(s) drive rear wheels. Also see X22-P04A and other relevant X22 codes.	Includes vehicle whose wheels are driven by both electric motor and e.g. internal combustion engine, including four wheel drive type vehicles where IC engine drives front wheels and electric motor(s) drive rear wheels. Also see X22-P04 and other relevant X22 codes.
X21-A01F	change scope			Includes electric vehicles (EV). Can also be applied to indicate general or unspecified electric vehicle application. See X21-A01J instead for fuel cell powered electric vehicles.	Includes electric vehicles (EV) and fuel cell electric vehicles (FCEV). Can also be applied to indicate general or unspecified electric vehicle application. Unspecified vehicles using fuel cells are considered to be electric vehicles rather than motor vehicles and are thus coded here.
X22 Automotive Electrics					
X22-A03B1	Change scope			This code is used for general cruise control systems either on its own or in conjunction with X22-G03A (transmission based cruise control) or X22-C02D4 (brake based cruise control). Includes inter-vehicle distance or vehicle spacing/separation control, e.g. using radar distance sensing (see also W06-A04 codes).	This code is used either on its own or in conjunction with X22-G03A.
X22-A03W	Change scope			Includes engine-based by-wire controllers not covered elsewhere. Drive-by-wire for vehicle/engine speed control is coded in X22-A03B2 instead. See X22-W for general non-engine based by-wire control. Also see X22-K codes for novel vehicle networking/communications systems that enable the by-wire control.	Includes engine based by-wire controllers not covered elsewhere. Drive-by-wire is coded in X22-A03B2 only. See X22-W for general non-engine based by-wire control.
X22-A12	Change title/scope	Engine noise/vibration reduction and damping	Engine noise reduction and damping	Includes active noise and vibration suppression devices such as electrically controlled engine mounts. See X22-A03X for general engine noise/vibration control. See W04-V07 codes also for active audible noise cancelling.	Includes active noise suppression. See W04-V codes also.
X22-C02	Change scope			See X22-C for records from 1980-1996. See Q18-A codes for mechanical aspects of vehicle brake systems.	See X22-C for records from 1980-1996.
X22-C02A	Change title/scope	Parking brakes	Hand brakes	Includes electrical aspects of hand brakes and foot actuated parking brakes. See X22-G codes also for transmission based parking brakes. See X22-C for records from 1980-1996.	Includes electrical aspects only. See X22-C for records from 1980-1996.
X22-C02D4	change search terms				
X22-C05	Change scope			Includes electrical aspects of steering wheel details. See Q18-B codes for mechanical aspects of vehicle steering systems.	
X22-C05A1	Change scope			Includes electrical aspects only. See Q18-B09 instead for mechanical passive four wheel steering systems.	"None"

CODE (max. 10 chars incl. spaces)	REASON	NEW TITLE	CURRENT TITLE	NEW SCOPE NOTES	CURRENT SCOPE NOTES (only include if scope notes are to be changed)
X22-E	Change scope			Includes touch-sensitive screens (see also T04-F codes). Also includes internal display for passengers e.g. in a bus indicating approaching stops (see also T07-A05D). For more details about general instrumentation for vehicles, section S codes must be searched. For example, S01-G06 for battery charge indicator, S02-G codes for speed sensors, S02-J codes for brake and transmission testing, and S02-K06 for recording or indicating in general. Also includes control of all information/warnings presented to driver according to driving situation, e.g. to prioritise important warnings and prevent driver from being distracted by display of minor warnings during emergency situations. For mechanical aspects of dashboard construction or mechanical instrumentation, see Q17-A11 instead.	Includes touch-sensitive screens (see also T04-F codes). Also includes internal display for passengers e.g. in a bus indicating approaching stops (see also T07-A05A1). For more details about general instrumentation for vehicles, section S codes must be searched. For example, S01-G06 for battery charge indicator, S02-G codes for speed sensors, S02-J codes for brake and transmission, and S02-K06 for recording or indicating in general. Also includes control of all information/warnings presented to driver according to driving situation, e.g. to prioritise important warnings and prevent driver from being distracted by display of minor warnings during emergency situations.
X22-E07	Change scope			Includes general projection displays, e.g. for head-up display of current vehicle speed (see also X22-E05) or head-up display of e.g. navigational data (see also X22-E06). See also W04-Q01K for head-up video displays.	Includes general projection displays. For head-up displays used for specific application, e.g. navigation aids, see also X22-E06. See also W04-Q01K.
X22-E09	Change scope			Only used when camera image is presented to driver. For video image recognition of e.g. road signs or obstacles, see X22-E13A only. Also see W04-M01 codes for novel video cameras per se, and W02-F01E for CCTV systems where image is presented to driver.	Only used when camera image is presented to driver. For video image recognition of e.g. road signs or obstacles, see X22-E13A only. Also see W04-M01 codes for novel cameras per se, and W02-F01 codes for general CCTV systems where image is presented to user.
X22-E13A	Change scope			Includes video image recognition of obstacles or road signs, e.g. to identify change of speed limits or hazards, road edges. See also T01-J10B/T04-D codes for image recognition. For systems presenting actual video image of road to driver display, see X22-E09 instead.	Includes video image recognition of obstacles or road signs, e.g. to identify change of speed limits or hazards, road edges. For systems presenting actual video image of road to driver display, see X22-E09 instead.
X22-F	Change title	Power supplies; batteries; alternators; charging	Batteries, alternators, charging		
X22-J11A	Change title/scope	Emergency signalling		Includes manually activated signalling and automatic mayday signalling or automatic activation of locating beacon after vehicle accident (also see W06-A01C for vehicle borne locating beacon). Automatically illuminated 'assistance required' sign (also see X22-B05).	Includes automatic mayday signalling and automatic activation of locating beacon after vehicle accident (also see W06-A01C for vehicle borne locating beacon). Automatically illuminated 'assistance required' sign (also see X22-B05).
X22-J12	Change scope			Includes e-mail, facsimile equipment powered by vehicle supply and on-board aspects such as novel displays and user interfaces used to view e.g. Internet information. From 200701 general Internet browsing e.g. for downloading local tourist information, map information, restaurant menus and shop opening times or for making hotel reservations and booking tickets, is transferred to X22-K08.	Includes e-mail, facsimile equipment powered by vehicle supply and reception of e.g. Internet information. Includes Internet browsing e.g. for downloading local tourist information (also see X22-E06F for downloading map information), restaurant menus and shop opening times or for making hotel reservations and booking tickets (see also T01-N codes).
X22-K	Change title/scope	Multiplexing/networking/communications		From 200701 this code has been expanded to include all multiplexing, networking and communications systems present in a vehicle (intra-vehicle), between vehicles (inter-vehicle) and between vehicles and the roadside (for road toll devices, see also X22-X07). See also W05-D codes which cover novel aspects of systems transmitting measurement or control signals, and W01-A06 codes for novel aspects of data networks. See X22-X for general intra/inter-vehicle communications prior to 2007. For vehicle telephone and hands-free systems see W01 codes instead.	See W05-D02 also for multiplexing control signals transmission; and T01-J07D1B for multiplex control system using microprocessor technology. Includes electric cable/wire and fibre-optic systems.
X22-W	Change scope			Includes general by-wire control systems, including 'total' vehicle by-wire control and specific controllers not covered elsewhere such as by-wire headlamp beam aiming controller (see also X22-B01E and X26-L). By-wire brake (X22-C02C7), shift (X22-C03G) and steer (X22-C05A1) controllers are coded in their relevant sections ONLY. See X22-A03W only for general engine based by-wire controllers. Also see X22-K codes for novel vehicle networking/communications systems that enable the by-wire control.	Includes general by-wire control systems, including 'total' vehicle by-wire control and specific controllers not covered elsewhere such as by-wire headlamp beam aiming controller (see also X22-B01E and X26-L). By-wire brake (X22-C02C7), shift (X22-C03G) and steer (X22-C05A1) controllers are coded in their relevant sections ONLY. See X22-A03W only for general engine based by-wire controllers.
X22-X	Change scope			Includes static electricity (see also X25-S) and cathodic protection (see also X25-R06); driving instruction simulators (see also W04-W07A); etc.	Includes disabled people aids; static electricity and cathodic protection; gas turbine propulsion unit (see also X22-P03); driving instruction simulators; etc.

X24 Electric Welding					
X24-A02	Change title/scope	(De)soldering equipment, irons, bits, baths	(De)soldering irons, bits, wave soldering baths	Includes soldering equipment and systems.	
X24-D03A	Change scope			Covers all aspects of working metal using laser beam (and having sufficient electrical content) e.g. cutting, trimming, hole forming etc. Also see appropriate corresponding codes in X25-A codes e.g. for cutting per se. Also includes laser-hybrid welding combining laser welding and e.g. shielded arc welding (also see X24-B06), and robotic laser welding.	Covers all aspects of working metal using laser beam (and having sufficient electrical content) e.g. cutting, trimming, hole forming etc. Also see appropriate corresponding codes in X25-A codes e.g. for cutting per se. Also includes laser-hybrid welding, and robotic laser welding.

CODE (max. 10 chars incl. spaces)	REASON	NEW TITLE	CURRENT TITLE	NEW SCOPE NOTES	CURRENT SCOPE NOTES (only include if scope notes are to be changed)
X24-D08A	Change scope			Involves applying ultrasonic vibrations parallel to interface of surfaces being joined, which are under compressive force, so that welding is reached through a solid state process involving atomic movement and diffusion. Also see X24-D04 for ultrasonic welding of plastics.	Involves applying ultrasonic vibrations parallel to interface of surfaces being joined, which are under compressive force, so that welding is reached through a solid state process involving atomic movement and diffusion. Also see X24-D06 for ultrasonic welding of plastics.
X25 Industrial Electric Equipment					
X25-A03	Change scope			Includes screw tighteners; general aspects of tools. For general control of machine tools see T06-D06 also. For systems for cleaning of work space, e.g. combined sanding and dust extracting machine, also see X25-H05.	Includes wood working; screw tighteners; general aspects of tools. For general control of machine tools see T06-D06 also. For systems for cleaning of work space, e.g. combined sanding and dust extracting machine, also see X25-H05.
X25-F03A	Change title/Scope	Packing/Bottling	Packing	Includes food packing/tinning and beverage bottling. See also X25-P01X for general food processing. See also X25-P01B for industrial beer brewing/alcoholic beverage production equipment, and X25-P01C for milk processing.	Includes food packing/tinning (see also X25-P01X).
X25-F05A	Change scope			Includes IC engine and electric forklift trucks and walk behind trucks (also see X22-P05F or X21-A01B for IC engine and electric fork lifts respectively). See T06-D08F for forklift control. See Q19-C06 instead for mechanical aspects of forklift trucks. Also includes walking robots and electrical aspects of shopping trolleys such as electric drive arrangements and advertising displays/bar-code readers. See Q22-A02 for mechanical aspects of trolleys.	Includes fork lift trucks, walking robots and electrical aspects of shopping trolleys. For control details see T06-D08F also.
X25-F05A1	Change scope/search			Includes robotic vehicles/trucks running on tracks or following painted lines on factory floor using e.g. optical sensors or image processing (see also T01-J10B/T04-D codes). See also T06-B01A and T06-D08F for 2D position control of goods conveying vehicles.	
X25-N02B	Change scope			See also X25-P01C for milk processing, and X25-F03A for milk bottling.	
X25-P01A	Change scope/search			Includes industrial scale food processing such as mixing bread dough and kneading, and also industrial cooking/baking systems such as large scale ovens. For domestic cooking/baking see X27-C codes instead.	Includes meat slicing, food packing/canning (also see X25-F03A for food packing/tinning). Also includes food/packaging sterilisation/disinfecting e.g. using mechanical cleaning, chemicals, heat, radiation or electricity.
X25-P01B	Change scope/search			Includes electrical aspects of large scale beer or wine making equipment. See X27-X02 only for small scale domestic brewing/wine making. See X25-F03A for bottling.	Includes electrical aspects of large scale beer or wine making equipment. See X27-X02 only for small scale domestic brewing/wine making.
X25-P01C	Change scope/search			Includes pasteurisation. See X25-N02B for milking control, metering and monitoring for livestock. See X25-F03A for bottling of milk.	Includes pasteurisation. See X25-N02B for milking control, metering and monitoring for livestock.
X25-P01X	Change scope/search			Includes meat slicing, food packing/canning (also see X25-F03A for food packing/tinning). Also includes food/packaging sterilisation/disinfection e.g. using mechanical cleaning, chemicals, heat, radiation or electricity. See e.g. X27-D10 for general domestic scale sterilising/disinfecting.	Includes meat slicing, food packing/canning. See X25-F03A also for food packing/tinning.
X25-V	Change scope			Includes electrical aspects of cryogenics producing very low temperatures (i.e. below -150 degrees Celsius).	"None"
X25-X01	Change scope			Includes tree felling and transporting equipment, wood drying (see X25-G also) and sawing of lumber. For wood working such as wood turning, see X25-A10 instead.	Includes tree felling and transporting equipment, wood drying (see X25-G also), sawing.
X25-X02	Change title/scope	Vermin/insect extermination, repulsion or trapping	Vermin/insect extermination	Includes devices for killing, trapping and deterring/scaring pests such as rats or flies. See X27-X for domestic insecticide dispenser, and X25-N01 for arable insecticide spraying.	See X27-X for domestic insecticide dispenser, and X25-N01 for arable insecticide spraying.
X26 Lighting					
X26-D01F	Change scope	Light guide		Includes light guides such as a plate, glass block, optical fibre, etc. used locally within a light fitting. For guiding of light over some distance, see X26-G. Where the light guiding aspect relates to the backlighting of an LCD, see also U14-K01A and W05-E05B (only for records prior to 2007) codes.	Includes light guides such as a plate, glass block, optical fibre, etc. locally within a light fitting. For guiding of light over some distance, see X26-G. Where the light guiding aspect relates to the backlighting of an LCD, see also U14-K01A and W05-E05 codes.
X26-H	Change scope			Includes semiconductor P-N junction type LEDs, and their circuits, when used for illumination. See also U12-A01 codes for LEDs per se. OLED- or organic LED-based lighting is covered by X26-J.	See also U12-A01 codes.
X26-J	Change scope			Includes electroluminescent devices - such as OLEDs - and their circuits, when used for illumination. Does not include EL/OLED (organic LED) displays. See also U14-J codes for all electroluminescent light sources and displays. LED-based lighting is covered by X26-H.	See also U14-J codes.
X26-U03	Change title/scope	Heating/curing	Heating	Includes e.g. IR heat lamps or UV lamps used for curing adhesives or inks. Not used when X26-B01B/C02B are applied.	Not used when X26-B01B/C02B are applied.
X2-D01E1	Change scope	For display		Includes back-lighting arrangements for displays. See also W05-E05B codes (only for records prior to 2007) and U14-K01A codes, respectively, for general and LC display back-lighting.	Includes back-lighting arrangements for displays. See also W05-E and U14-K codes, respectively, for general and LC display back-lighting.
X27 Domestic Electrical Appliances					
X27-B	Change scope			Includes all aspects of electrical kitchen appliances.	Includes all aspects of electrical equipment e.g. food warmer for serving trolley, post-mix beverage dispenser for carbonated drinks, Vacuum flask.
X27-B01	Change search				

CODE (max. 10 chars incl. spaces)	REASON	NEW TITLE	CURRENT TITLE	NEW SCOPE NOTES	CURRENT SCOPE NOTES (only include if scope notes are to be changed)
X27-B03	Change scope			Includes juice extractor, processor tools, ice-cream manufacture. See X27-C08 instead for bread makers.	Includes juice extractor, processor tools, ice-cream mfr.
X27-C09	Change scope			Includes electrical devices inserted into food to measure temperature, cooking time estimation. Also includes slow cookers.	Includes electrical devices inserted into food to measure temperature, cooking time estimation.
X27-D01	Change scope/search			Includes all aspects, e.g. feet, doors, water inlet/outlets pipes etc. Excludes kitchen 'furniture' aspects such as worktop under which machine is kept.	
X27-D01B1X			Other	Includes portable top-loading or 'counter top' dishwashers and ultrasonic washers incorporated into a sink (see also X27-D07A).	Includes portable top-loading or 'counter top' dishwashers
X27-D01C	Change title/scope	Combined laundry washer/drier		This code can be used in conjunction with X27-D01A or X27-D02 codes as appropriate to highlight the novel aspects.	
X27-D02	Change scope/search (delete search terms)			Includes clothes and shoe driers.	
X27-D04	Change scope			For combined vacuum cleaner and e.g. carpet washer, also see X27-D08.	"none"
X27-D10	Change scope			Includes general disinfection and sterilisation systems not covered elsewhere, e.g. using ultraviolet/microwave radiation or heat. For mixed mode cleaning/sterilising see X27-D07 codes only. For air treatment arrangements see X27-E01B2 only. Industrial food processing sterilisation is covered by X25-P01X only, and medical sterilisation is covered by S05-G01 codes only.	Includes general disinfection and sterilisation systems not covered elsewhere, e.g. using ultraviolet/microwave radiation or heat. For mixed mode cleaning/sterilising see X27-D07 codes only. For air treatment arrangements see X27-E01B2 only. Industrial food processing sterilisation is covered by X25-P01A only, and medical sterilisation is covered by S05-G01 codes only.
X27-F02B1	Change scope			Includes thermoelectric cooling, e.g. for mini fridge and freezers and picnic coolers. See V04-T03C instead for thermoelectric cooling used in electronic devices, and U14-E05A2 for thermoelectric devices. Also includes electrocaloric effect cooling using e.g. thin film perovskite PZT (PbZrTiO3) to provide cooling under an applied electric field.	Includes thermoelectric cooling, e.g. for mini fridge and freezers and picnic coolers. See V04-T03C only for thermoelectric cooling used in electronic devices, and possibly U14-E codes for thermoelectric devices.

KEYWORDS/SEARCH
TERMS

KEYWORDS/SEARCH TERMS

Steam engine

Stirling engine

Hydraulic lash adjusters

Pulsejet, deflagration

KEYWORDS/SEARCH TERMS

Needle valve

OCT, optical coherence tomography

KEYWORDS/SEARCH TERMS

C, C++, Java (Trademark),
API, Binary compilation

Plug and Play (PnP), BIOS
update.

Object-oriented
programming.

Structured Systems
Analysis and Design.

API, Code libraries, Code
text editors.

Beta-testing, Debug, Test
case simulation.

Virus signature analysis

entiprise systems, SAP
(tm), NetWeaver (ttm)

Automatic software updates

Anti-Virus, Anti-Spyware,
Trojan, Worm

KEYWORDS/SEARCH
TERMS

**KEYWORDS/SEARCH
TERMS**

CD, CD-ROM, CD-R, CD-
RW, DVD, DVD-ROM,
DVD-R, DVD-RW, DVD-
RAM, DVD+R,
DVD+RW,HD-DVD, BD-
ROM, BD-R, BD-RW, Blu
Ray, UMD

**KEYWORDS/SEARCH
TERMS**

KEYWORDS/SEARCH
TERMS

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KEYWORDS/SEARCH TERMS

Heat pumps, cooling,
Peltier, electrocaloric
effect, thin film perovskite
PZT

SAR, serial comparator

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Bird cage-, resonator-,
saddle-, surface-coils

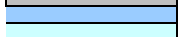
Heat pumps, cooling,
Peltier, electrocaloric
effect, thin film perovskite
PZT

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KEYWORDS/SEARCH
TERMS

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KEYWORDS/SEARCH TERMS



Routing, IP multicast

Mobile IP

MAU (medium attachment units), BBN (backbone network)

Space switching, optical switching, relay, electronic, switch, matrix



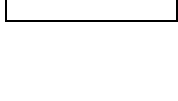
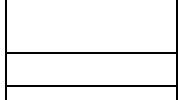
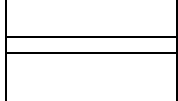
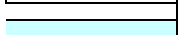
GPRS, EDGE, packet

Personal digital organiser, PDA



GPRS, EDGE, packet, radio

Promotions, offers, adverts



KEYWORDS/SEARCH
TERMS

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Suggester

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**KEYWORDS/SEARCH
TERMS**

Quarter wave plate

Cyclic sensor
interrogation, sequential
monitoring

TDM

FDM

**KEYWORDS/SEARCH
TERMS**

KEYWORDS/SEARCH TERMS

Delete cable drums, reels

Adaptive cruise control

Automatic distance regulation, ADR, adaptive cruise control, radar, anti-collision

KEYWORDS/SEARCH
TERMS

KEYWORDS/SEARCH TERMS

Wrapping, staplers, bottles

Factory automation vehicles, automatic guided vehicle, AGV

"Please delete all search terms for this code"

Packing, canning, tinning, sterilising, UV, microwave, ultrasonic, plasma

Percolator, cappuccino machine, expresso maker

