EUROPEAN PATENT OFFICE
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 762

DATE: JANUARY 1, 2020

PROJECT RP0655

The following classification changes will be effected by this Notice of Changes:

Action	Subclass	Group(s)
SCHEME:		
Symbols Deleted:	H03K	19/17776
Symbols New:	H03K	19/17758
Titles Changed:	H03K	SUBCLASS
	H03K	3/00, 3/80
	H03K	4/00, 4/90
	H03K	5/00, 5/003, 5/02, 5/125, 5/1532
	H03K	6/04
	H03K	12/00
	H03K	17/00, 17/082, 17/13, 17/28, 17/52, 17/54, 17/56, 17/58, 17/60, 17/62, 17/687, 17/693, 17/70, 17/735, 17/74, 17/76, 17/81, 17/82, 17/84, 17/86, 17/88, 17/90, 17/92, 17/94, 17/96
	H03K	19/00, 19/17704, 19/17724, 19/17728, 19/17732, 19/17736, 19/17748, 19/17752, 19/17756, 19/1776, 19/17764, 19/17768, 19/17772, 19/1778, 19/17784, 19/17788, 19/17792, 19/17796
DEFINITIONS:		
Definitions Modified:	H03K	SUBCLASS
	H03K	3/00
	H03K	4/00
	H03K	5/00, 5/003, 5/13, 5/1532
	H03K	17/00, 17/13, 17/60, 17/687, 17/693, 17/94, 17/96
	H03K	19/00

No other subclasses/groups are impacted by this Notice of Changes.

This Notice of Changes includes the following *[Check the ones included]:*

1. CLASSIFICATION SCHEME CHANGES

  ☒ A. New, Modified or Deleted Group(s)

  ☐ B. New, Modified or Deleted Warning(s)

  ☐ C. New, Modified or Deleted Note(s)

  ☐ D. New, Modified or Deleted Guidance Heading(s)

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2. DEFINITIONS

☐ A. New or Modified Definitions (Full definition template)

☒ B. Modified or Deleted Definitions (Definitions Quick Fix)

3. ☒ REVISION CONCORDANCE LIST (RCL)

4. ☒ CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)

5. ☐ CHANGES TO THE CROSS-REFERENCE LIST (CRL)

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1. CLASSIFICATION SCHEME CHANGES

   A. New, Modified or Deleted Group(s)

SUBCLASS H03K – PULSE TECHNIQUE (....)

Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
M	H03K	SUBCLASS	PULSE TECHNIQUE (measuring pulse characteristics G01R; modulating sinusoidal oscillations with pulses H03C; transmission of digital information H04L; discriminator circuits detecting phase difference between two signals by counting or integrating cycles of oscillation H03D 3/04; automatic control, starting, synchronisation or stabilisation of generators of electronic oscillations or pulses where the type of generator is irrelevant or unspecified H03L; coding, decoding or code conversion, in general H03M)	
M	H03K 3/00	0	Circuits for generating electric pulses; Monostable, bistable or multistable circuits (H03K 4/00 takes precedence; for digital function generators in computers G06F 1/02)	
M	H03K 3/80	1	Generating trains of sinusoidal oscillations (by keying or interruption of sinusoidal oscillations H03C; for transmission of digital information H04L)	
M	H03K 4/00	0	Generating pulses having essentially a finite slope or stepped portions	
M	H03K 4/90	3	Linearisation of ramp (modifying slopes of pulses H03K 6/04; scanning distortion correction for television receivers H04N 3/23); Synchronisation of pulses	
M	H03K 5/00	0	Manipulating of pulses not covered by one of the other main groups of this subclass (circuits with regenerative action H03K 3/00, H03K 4/00; by the use of non-linear magnetic or dielectric devices H03K 3/45)	
M	H03K 5/003	1	Changing the DC level (reinsertion of dc component of a television signal H04N 5/16)	
M	H03K 5/02	2	by amplifying (H03K 5/04 takes precedence)	
M	H03K 5/125	1	Discriminating pulses (measuring characteristics of individual pulses G01R 29/02; separation of synchronising signals in television systems H04N 5/08)	

Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
M	H03K 5/1532	2	Peak detectors (measuring characteristics of individual pulses G01R 29/02)	
M	H03K 6/04	1	Modifying slopes of pulses, e.g. S-correction (S-correction in television H04N 3/23)	
M	H03K 12/00	0	Producing pulses by distorting or combining sinusoidal waveforms (shaping pulses H03K 5/01; combining sinewaves using elements operating in a non-switching manner H03B 21/00)	
M	H03K 17/00	0	Electronic switching or gating, i.e. not by contact-making and –breaking (gated amplifiers H03F 3/72; switching arrangements for exchange systems using static devices H04Q 3/52)	
M	H03K 17/082	2	by feedback from the output to the control circuit	
M	H03K 17/13	1	Modifications for switching at zero crossing (generating an impulse at zero crossing H03K 5/1536)	
M	H03K 17/28	1	Modifications for introducing a time delay before switching (modifications to provide a choice of time-intervals for executing more than one switching action H03K 17/296)	
M	H03K 17/52	2	by the use, as active elements, of gas-filled tubes	
M	H03K 17/54	2	by the use, as active elements of vacuum tubes (using diodes H03K 17/74)	
M	H03K 17/56	2	by the use, as active elements, of semiconductor devices (using diodes H03K 17/74)	
M	H03K 17/58	3	the devices being tunnel diodes	
M	H03K 17/60	3	the devices being bipolar transistors (bipolar transistors having four or more electrodes H03K 17/72)	
M	H03K 17/62	4	Switching arrangements with several input-output-terminals, e.g. multiplexers, distributors (logic circuits H03K 19/00; code converters H03M 5/00, H03M 7/00)	
M	H03K 17/687	3	the devices being field-effect transistors	
M	H03K 17/693	4	Switching arrangements with several input- or output-terminals, e.g. multiplexers, distributors (logic circuits H03K 19/00; code converters H03M 5/00, H03M 7/00)	
M	H03K 17/70	3	the devices having only two electrodes and exhibiting negative resistance (the devices being tunnel diodes H03K 17/58)	

Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
M	H03K 17/735	4	Switching arrangements with several input- or output-terminals, e.g. multiplexers, distributors (H03K 17/722 takes precedence; logic circuits H03K 19/00; code converters H03M 5/00, H03M 7/00)	
M	H03K 17/74	2	by the use, as active elements, of diodes (by the use of more than one type of semiconductor device H03K 17/567; by the use of tunnel diodes H03K 17/58; by the use of negative resistance diodes H03K 17/70)	
M	H03K 17/76	3	Switching arrangements with several input- or output-terminals, e.g. multiplexers, distributors (logic circuits H03K 19/00; code converters H03M 5/00, H03M 7/00)	
M	H03K 17/81	3	Switching arrangements with several input- or output-terminals, e.g. multiplexers, distributors (logic circuits H03K 19/00; code converters H03M 5/00, H03M 7/00)	
M	H03K 17/82	3	the devices being transfluxors	
M	H03K 17/84	3	the devices being thin-film devices	
M	H03K 17/86	3	the devices being twistors	
M	H03K 17/88	2	By the use, as active elements, of beam-deflection tubes	
M	H03K 17/90	2	by the use, as active elements, of galvano-magnetic devices, e.g. Hall-effect devices (H03K 17/95, H03K 17/97 take precedence)	
M	H03K 17/92	2	by the use, as active elements, of superconductive devices	
M	H03K 17/94	1	characterised by the way in which the control signals are generated	
M	H03K 17/96	2	Touch switches (specially adapted for electronic time-pieces with no moving parts G04G 21/08)	
M	H03K 19/00	0	Logic circuits, i.e. having at least two inputs acting on one output (circuits for computer systems using fuzzy logic G06N 7/02); Inverting circuits	
U	H03K 19/177	3	arranged in matrix form	
M	H03K 19/17704	4	the logic functions being realised by the interconnection of rows and columns	
M	H03K 19/17724	4	Structural details of logic blocks	
M	H03K 19/17728	5	Reconfigurable logic blocks, e.g. lookup tables	
M	H03K 19/17732	5	Macroblocks	
M	H03K 19/17736	4	Structural details of routing resources	
M	H03K 19/17748	4	Structural details of configuration resources	
M	H03K 19/17752	5	for hot reconfiguration	

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Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
M	H03K 19/17756	5	for partial configuration or partial reconfiguration	
N	H03K 19/17758	5	for speeding up configuration or reconfiguration	
M	H03K 19/1776	5	for memories	
M	H03K 19/17764	5	for reliability	
M	H03K 19/17768	5	for security	
M	H03K 19/17772	5	for powering on or off	
D	H03K 19/17776	5	{for speeding up configuration or reconfiguration}	<administrative transfer to H03K 19/17758>
M	H03K 19/1778	4	Structural details for adapting physical parameters	
M	H03K 19/17784	5	for supply voltage	
M	H03K 19/17788	5	for input/output [I/O] voltages	
M	H03K 19/17792	5	for operating speed	
M	H03K 19/17796	5	for physical disposition of blocks	

*N = new entries where reclassification into entries is involved; C = entries with modified file scope where reclassification of documents from the entries is involved; Q = new entries which are firstly populated with documents via administrative transfers from deleted (D) entries. Afterwards, the transferred documents into the Q entry will either stay or be moved to more appropriate entries, as determined by intellectual reclassification; T= existing entries with enlarged file scope, which receive documents from C or D entries, e.g. when a limiting reference is removed from the entry title; M = entries with no change to the file scope (no reclassification); D = deleted entries; F = frozen entries will be deleted once reclassification of documents from the entries is completed; U = entries that are unchanged.

NOTES:
- **No {curly brackets} are used for titles in CPC only subclasses, e.g. C12Y, A23Y; 2000 series symbol titles of groups found at the end of schemes (orthogonal codes); or the Y section titles. The {curly brackets} are used for 2000 series symbol titles found interspersed throughout the main trunk schemes (breakdown codes).
- U groups: it is obligatory to display the required "anchor" symbol (U group), i.e. the entry immediately preceding a new group or an array of new groups to be created (in case new groups are not clearly subgroups of C-type groups).Always include the symbol, indent level and title of the U group in the table above.
- All entry types should be included in the scheme changes table above for better understanding of the overall scheme change picture. Symbol, indent level, and title are required for all types .
- "Transferred to" column must be completed for all C, D, F, and Q type entries. F groups will be deleted once reclassification is completed.
- When multiple symbols are included in the "Transferred to" column, avoid using ranges of symbols in order to be as precise as possible.
- For administrative transfer of documents, the following text should be used: "< administrative transfer to XX>", "<administrative transfer to XX and YY simultaneously>", or "<administrative transfer to XX, YY, ...and ZZ simultaneously>" when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be the source allocation type, unless otherwise indicated.
- Administrative transfer to 2000/Y series groups is assumed to be "additional information".
- If needed, instructions for allocation type should be indicated within the angle brackets using the abbreviations "ADD" or "INV": <administrative transfer to XX ADD> , <administrative transfer to XX INV>, or < administrative transfer to XX ADD, YY INV, ... and ZZ ADD simultaneously>.
- In certain situations, the "D" entries of 2000-series or Y-series groups may not require a destination ("Transferred to") symbol, however it is required to specify "<no transfer>" in the "Transferred to" column for such cases.
- For finalisation projects, the deleted "F" symbols should have <no transfer> in the "Transferred to" column.
- For more details about the types of scheme change, see CPC Guide.

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2. B. DEFINITIONS QUICK FIX

Symbol	Location of change (e.g., section title)	Existing reference symbol or text	Action; New symbol; New text
H03K	Definition Statement		**Replace** existing Definition Statement with the following new one: • methods, circuits, devices, or apparatus using active elements operating in a discontinuous or switching manner for generating, shaping and manipulating pulse signals • generating stepped pulses or pulses having an essentially finite slope • producing pulses by distorting or combining sinusoidal waveforms • shaping, amplifying and otherwise manipulating pulse signals • modulating pulses with a continuously variable modulating signal, and demodulating pulses which have been so modulated • transforming types of pulse modulation • electronic switching not involving contact-making and breaking • logic circuits handling electric pulses • counting pulses, pulse counters and frequency

			dividers, pulse counters with step-by-step integration and static storage, pulse counters in which pulses are continuously circulated, pulse counters comprising multi-stable elements
H03K	Relationship between large subject matter areas		**Insert** a **new** Relationships with other classification places section with the following paragraphs: **Relationships with other classification places** The modulation and demodulation of pulse trains, for example in Pulse Width Modulation circuits, is covered in subclass H03K. The modulation and demodulation of sinusoidal signals, for example in AM and FM broadcasting, is covered in subclasses H03C and H03D. The modulation by digital signals of the frequency, phase or amplitude of sinusoidal carrier, or carriers, is covered in subclass H04L. Quadrature (I-Q) modulation systems used for the transmission of digital information, e.g. QAM, the effect of which is to modulate a carrier in both amplitude and phase

			(often in discrete steps, which may be illustrated as a 'constellation' of points, each point representing a pair of carrier amplitude and phase values), are covered in subclass H04L. Analogue quadrature modulation used in the NTSC and PAL colour television systems (where the I and Q signals representing colour difference values are substantially continuously variable), is covered in H04N.
H03K	Limiting references		**Delete** the following six references: mechanical counters having an electrical input G06M; information storage devices in general G11 sample-and-hold arrangements in electric analogue stores G11C 27/02 construction of switches involving contact making and breaking for generation of pulses, e.g. by using a moving magnet H01H static conversion of electric power H02M; generation of oscillations by circuits employing active elements which operate in a non-switching manner H03B;

| H03K | Limiting references | | **Replace** the following reference:

odulating sinusoidal oscillations with pulses H03C, H04L;

With these two rows:

    Modulating sinusoidal oscillations with pulses H03C

    Transmission of digital information; modulated carrier systems H04L, H04L 27/00

Replace the following reference:

discriminator circuits involving pulse counting H03D;

With this reference:

    Demodulation or transference of signals modulated on a sinusoidal carrier H03D

Replace the following two references:

automatic control of generators H03L

starting, synchronisation or stabilisation of generaors where the type of generator is irrelevant or unspecified H03L

With the following reference:

    Automatic control, starting, synchronizing or |

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			stabilization of generators of electronic oscillations or pulses where the type of generator is irrelevant or unspecified H03L
H03K	Informative references		**Insert** a new Informative references section with the following six references. ***Informative references*** *Attention is drawn to the following places, which may be of interest for search:* Counting mechanisms G06M Information storage based on relative movement between record G11B, G11C Sample and hold arrangements in electric analogue stores G11C 27/02 Electric Switches; Relays; Selectors; Emergency protective devices H01H Apparatus for conversion of electric power H02M Generation of oscillations by circuits employing active elements which operate in a non-switching manner H03B

H03K	Special rules of classification		**Insert** a new Special rules of classification section with the following paragraph. **Special rules of classification** In this subclass, where the claims of a patent document are not limited to a specific circuit element, the document is classified at least according to the elements described in the described embodiment.
H03K	Glossary of terms		**Add** the following term to the Glossary of terms table. 'continuously-variable' modulating signal Analogue signals or signals that comprise a number of discrete levels, such as signals produced by counting circuits.
H03K3/00	Limiting references		**Replace** existing Limiting references table with the following new one. Generating pulses having essentially a finite slope or stepped portions H03K 4/00 Digital function generators G06F 1/02 Generating or distributing clock signals or signals derived directly therefrom G06F 1/04

H03K4/00	Limiting references		**Delete** the entire Limiting references section
H03K4/00	Informative references		**Insert** a new Informative references section with the following reference. *Informative references* *Attention is drawn to the following places, which may be of interest for search:* Generation of supply voltages in combination with electron beam deflection in television scanning systems H04N 3/18
H03K5/00	Limiting references		**Insert** a new Limiting references section with the following two new references. *Limiting references* *This place does not cover:* circuits with regenerative action H03K 3/00, H03K 4/00 by the use of non-linear magnetic or dielectric devices H03K 3/45
H03K5/003	Limiting references		**Replace** existing Limiting references table with the following new one. reinsertion of dc component of a television signal H04N 5/16

H03K5/13	Informative references		**Insert** a new Informative references section with the following reference. *Informative references* *Attention is drawn to the following places, which may be of interest for search:* Measuring time intervals using electronic timing, e.g. counting means G04F 1/00
H03K5/1532	Limiting references		**Replace** existing Limiting references table with the following new one. Measuring characteristics of individual pulses G01R 29/02
H03K17/00	Limiting references		**Insert** a new Limiting references section with the following two references. *Limiting references* *This place does not cover:* gated amplifiers H03F 3/72 switching arrangements for exchange systems using static devices H04Q 3/52
H03K17/00	Informative references		**Insert** a new Informative references section with the following two references. *Informative references*

			Attention is drawn to the following places, which may be of interest for search: In electric printing, selection of a stylus or auxiliary electrode to be supplied with current for transfer to printing or impression transfer material B41J 2/405 Switching or interrupting devices in waveguides H01P
H03K17/13	Limiting references		**Insert** a new Limiting references section with the following reference. *Limiting references* *This place does not cover:* generating an impulse at zero crossing H03K 5/1536
H03K17/13	Informative references		**Delete** the entire Informative references section
H03K17/60	Limiting references		**Insert** a new Limiting references section with the following reference. *Limiting references* *This place does not cover:* bipolar transistors having four or more electrodes H03K 17/72
H03K17/687	Limiting references		**Delete** entire Definition

H03K17/693	Limiting references		**Insert** a new Limiting references section with the following two new references. *Limiting references* *This place does not cover:* logic circuits H03K 19/00 Code converters H03M 5/00, H03M 7/00
H03K17/94	Limiting references		**Delete** the entire Limiting references section
H03K17/94	Informative references		**Replace** existing Limiting references table with the following new one. Structural details of switches, relays or selectors and emergency protective devices, their contact and mechanical operating arrangements; operation by mechanical forces or by a change of physical condition; time programming switches and switches providing a selected number of operations of the contacts H01H Keyboards for special applications: see the relevant places B41J, G06F 3/023, H04L 15/00, H04L 17/00, H04M 1/00
H03K17/96	Limiting references		**Insert** a new Limiting references section with the following new reference. *Limiting references*

			This place does not cover: specially adapted for electronic time-pieces with no moving parts G04G 21/08
H03K19/00	Limiting references		**Replace** existing Limiting references table with the following new one. circuits for computer systems using fuzzy logic G06N 7/02

NOTES:
- The table above is used for corrections or modifications to existing definitions, e.g. delete an entire definition or part thereof; propose new wording or modify wording of a section, change the symbol the definition is associated with, change or delete a reference symbol, etc.
- Do not delete (F) symbol definitions.

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3.   REVISION CONCORDANCE LIST (RCL)

Type*	From CPC Symbol (existing)	To CPC Symbol(s)
D	H03K 19/17776	<administrative transfer to H03K 19/17758>

* C = entries with modified file scope where reclassification of documents from the entries is involved; Q = new entries which are firstly populated with documents via administrative transfers from deleted (D) entries. Afterwards, the transferred documents into the Q entry will either stay or be moved to more appropriate entries, as determined by intellectual reclassification; D = deleted entries; F = frozen entries will be deleted once reclassification of documents from the entries is completed.

NOTES:
- Only C, D, F, and Q type entries are included in the table above.
- When multiple symbols are included in the "To" column, do not use ranges of symbols.
- For administrative transfer of documents, the following text should be used: "< administrative transfer to XX>", "<administrative transfer to XX and YY simultaneously>", or "<administrative transfer to XX, YY, ...and ZZ simultaneously>" when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be the source allocation type, unless otherwise indicated.
- Administrative transfer to 2000/Y series groups is assumed to be "additional information".
- If needed, instructions for allocation type should be indicated within the angle brackets using the abbreviations "ADD" or "INV": <administrative transfer to XX ADD>, <administrative transfer to XX INV>, or < administrative transfer to XX ADD, YY INV, ... and ZZ ADD simultaneously>.
- In certain situations, the "D" entries of 2000-series or Y-series groups may not require a destination ("To") symbol, however it is required to specify "<no transfer>" in the "To" column for such cases.
- RCL is not needed for finalisation projects.

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4. CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)

CPC	IPC	Action*
H03K 19/17704	H03K 19/17704	UPDATE
H03K 19/17708	H03K 19/17704	UPDATE
H03K 19/17712	H03K 19/17704	UPDATE
H03K 19/17716	H03K 19/17704	UPDATE
H03K 19/1772	H03K 19/17704	UPDATE
H03K 19/17724	H03K 19/17724	UPDATE
H03K 19/17728	H03K 19/17728	UPDATE
H03K 19/17732	H03K 19/17732	UPDATE
H03K 19/17736	H03K 19/17736	UPDATE
H03K 19/1774	H03K 19/17736	UPDATE
H03K 19/17744	H03K 19/17736	UPDATE
H03K 19/17748	H03K 19/17748	UPDATE
H03K 19/17752	H03K 19/17752	UPDATE
H03K 19/17756	H03K 19/17756	UPDATE
H03K 19/17758	H03K 19/17758	NEW
H03K 19/1776	H03K 19/1776	UPDATE
H03K 19/17764	H03K 19/17764	UPDATE
H03K 19/17768	H03K 19/17768	UPDATE
H03K 19/17772	H03K 19/17772	UPDATE
H03K 19/17776		DELETE
H03K 19/1778	H03K 19/1778	UPDATE
H03K 19/17784	H03K 19/17784	UPDATE
H03K 19/17788	H03K 19/17788	UPDATE
H03K 19/17792	H03K 19/17792	UPDATE
H03K 19/17796	H03K 19/17796	UPDATE

*Action column:
- For an (N) or (Q) entry, provide an IPC symbol and complete the Action column with "NEW."
- For an existing CPC main trunk entry or indexing entry where the existing IPC symbol needs to be changed, provide an updated IPC symbol and complete the Action column with "UPDATED."
- For a (D) CPC entry or indexing entry complete the Action column with "DELETE." IPC symbol does not need to be included in the IPC column.
- For an (N) 2000 series CPC entry which is positioned within the main trunk scheme (breakdown code) provide an IPC symbol and complete the action column with "NEW".
- For an (N) 2000 series CPC entry positioned at the end of the CPC scheme (orthogonal code), with no IPC equivalent, complete the IPC column with "CPCONLY" and complete the action column with "NEW".

NOTES:
- F symbols are not included in the CICL table above.
- T and M symbols are not included in the CICL table above unless a change to the existing IPC is desired.