н	Sektion	SECTION H — ELECTRICITY
H04	Klasse	ELECTRIC COMMUNICATION TECHNIQUE
H04R	Unterklasse	LOUDSPEAKERS, MICROPHONES, GRAMOPHONE PICK-UPS OR LIKE ACOUSTIC ELECTROMECHANICAL TRANSDUCERS; DEAF-AID SETS; PUBLIC ADDRESS SYSTEMS (generating mechanical vibrations in general B06B; transducers for measuring particular variables G01; transducers in clocks G04; producing sounds with frequency not determined by supply frequency G10K; transducers in recording or reproducing heads G11B; transducers in motors H02) [6]
H04R 1/00	Hauptgruppe	Details of transducers (diaphragms H04R 7/00; characterised by the nature of the transducer, <u>see</u>
		the relevant group of main groups H04R 9/00-H04R 23/00; mounting radio sets or communication systems in helmets A42B 3/30; mountings specially adapted for telephone equipment H04M 1/02)
H04R 1/02	1-Punkt Untergruppe	. Casings; Cabinets; Mountings therein (H04R 1/28 takes precedence)
H04R 1/04	2-Punkt Untergruppe	Structural association of microphone with electric circuitry therefor (in deaf-aid sets H04R 25/00)
H04R 1/06	1-Punkt Untergruppe	. Arranging circuit leads; Relieving strain on circuit leads
H04R 1/08	1-Punkt Untergruppe	. Mouthpieces; Attachments therefor
H04R 1/10	1-Punkt Untergruppe	. Earpieces; Attachments therefor
H04R 1/12	1-Punkt Untergruppe	. Sanitary or hygienic devices for mouthpieces or earpieces, e.g. for protecting against infection
H04R 1/14	1-Punkt Untergruppe	. Throat mountings for microphones
H04R 1/16	1-Punkt Untergruppe	. Mounting or connecting stylus to transducer with or without damping means
H04R 1/18	2-Punkt Untergruppe	Holders for styli; Mounting holders on transducers
H04R 1/20	1-Punkt Untergruppe	. Arrangements for obtaining desired frequency or directional characteristics (for stereophonic purposes H04R 5/00; speech enhancement by processing of the speech signal G10L 21/02)
H04R 1/22	2-Punkt Untergruppe	for obtaining desired frequency characteristic only (circuits for combining transducers having different responses H04R 3/00)
H04R 1/24	3-Punkt Untergruppe	Structural combinations of separate transducers or of parts of the same transducer and responsive respectively to two or more frequency ranges
H04R 1/26	3-Punkt Untergruppe	Spatial arrangement of separate transducers responsive to two or more frequency ranges
H04R 1/28	3-Punkt Untergruppe	Transducer mountings or enclosures designed for specific frequency response; Transducer enclosures modified by provision of mechanical or acoustic impedances, e.g. resonator, damping means
H04R 1/30	3-Punkt Untergruppe	Combinations of transducers with horns, e.g. with mechanical matching means (horns in general G10K)
H04R 1/32	2-Punkt Untergruppe	for obtaining desired directional characteristic only
H04R 1/34	3-Punkt Untergruppe	by using a single transducer with sound reflecting, diffracting, directing or guiding means
H04R 1/36	4-Punkt Untergruppe	by using a single aperture of dimensions not greater than the shortest operating wavelength
H04R 1/38	4-Punkt Untergruppe	in which sound waves act upon both sides of a diaphragm and incorporating acoustic phase-shifting means, e.g. pressure-gradient microphone
H04R 1/40	3-Punkt Untergruppe	by combining a number of identical transducers
H04R 1/42	1-Punkt Untergruppe	. Combinations of transducers with fluid-pressure or other non-electrical amplifying means

Symbol	Тур	Titel
H04R 1/44	1-Punkt Untergruppe	. Special adaptations for subaqueous use, e.g. for hydrophone
H04R 1/46	1-Punkt Untergruppe	. Special adaptations for use as contact microphones, e.g. on musical instrument, on stethoscope (throat mountings H04R 1/14)
H04R 3/00	Hauptgruppe	Circuits for transducers (for stereophonic arrangements H04R $5/04$; arrangements for producing a reverberation or echo sound G10K $15/08$; amplifiers H03F)
H04R 3/02	1-Punkt Untergruppe	. for preventing acoustic reaction
H04R 3/04	1-Punkt Untergruppe	. for correcting frequency response
H04R 3/06	2-Punkt Untergruppe	of electrostatic transducers
H04R 3/08	2-Punkt Untergruppe	of electromagnetic transducers
H04R 3/10	2-Punkt Untergruppe	of variable-resistance microphones
H04R 3/12	1-Punkt Untergruppe	. for distributing signals to two or more loud-speakers
H04R 3/14	2-Punkt Untergruppe	Cross-over networks
H04R 5/00	Hauptgruppe	Stereophonic arrangements (stereophonic pick-ups H04R 9/16, H04R 11/12, H04R 17/08, H04R 19/10)
H04R 5/02	1-Punkt Untergruppe	. Spatial or constructional arrangements of loud-speakers
H04R 5/027	1-Punkt Untergruppe	. Spatial or constructional arrangements of microphones, e.g. in dummy heads [3]
H04R 5/033	1-Punkt Untergruppe	. Headphones for stereophonic communication [3]
H04R 5/04	1-Punkt Untergruppe	. Circuit arrangements (combinations of amplifiers H03F 3/68; stereophonic systems H04S)
H04R 7/00	Hauptgruppe	Diaphragms for electromechanical transducers (in general F16J 3/00); Cones (for musical instruments G10)
H04R 7/00 H04R 7/02	Hauptgruppe 1-Punkt Untergruppe	
	1-Punkt Untergruppe	instruments G10)
H04R 7/02	1-Punkt Untergruppe	instruments G10) . characterised by the construction
H04R 7/02 H04R 7/04	1-Punkt Untergruppe 2-Punkt Untergruppe	instruments G10) . characterised by the construction Plane diaphragms
H04R 7/02 H04R 7/04 H04R 7/06	1-Punkt Untergruppe 2-Punkt Untergruppe 3-Punkt Untergruppe	 instruments G10) . characterised by the construction . Plane diaphragms comprising a plurality of sections or layers
H04R 7/02 H04R 7/04 H04R 7/06 H04R 7/08	1-Punkt Untergruppe 2-Punkt Untergruppe 3-Punkt Untergruppe 4-Punkt Untergruppe	 instruments G10) . characterised by the construction . Plane diaphragms comprising a plurality of sections or layers comprising superposed layers separated by air or other fluid
H04R 7/02 H04R 7/04 H04R 7/06 H04R 7/08 H04R 7/10	1-Punkt Untergruppe 2-Punkt Untergruppe 3-Punkt Untergruppe 4-Punkt Untergruppe 4-Punkt Untergruppe	 instruments G10) . characterised by the construction . Plane diaphragms comprising a plurality of sections or layers comprising superposed layers separated by air or other fluid comprising superposed layers in contact
H04R 7/02 H04R 7/04 H04R 7/06 H04R 7/08 H04R 7/10 H04R 7/12	1-Punkt Untergruppe 2-Punkt Untergruppe 3-Punkt Untergruppe 4-Punkt Untergruppe 4-Punkt Untergruppe 2-Punkt Untergruppe	 instruments G10) . characterised by the construction . Plane diaphragms comprising a plurality of sections or layers comprising superposed layers separated by air or other fluid comprising superposed layers in contact Non-planar diaphragms or cones
H04R 7/02 H04R 7/04 H04R 7/06 H04R 7/08 H04R 7/10 H04R 7/12	1-Punkt Untergruppe 2-Punkt Untergruppe 3-Punkt Untergruppe 4-Punkt Untergruppe 4-Punkt Untergruppe 2-Punkt Untergruppe 3-Punkt Untergruppe	instruments G10) . characterised by the construction . Plane diaphragms comprising a plurality of sections or layers comprising superposed layers separated by air or other fluid comprising superposed layers in contact . Non-planar diaphragms or cones corrugated, pleated, or ribbed
H04R 7/02 H04R 7/04 H04R 7/06 H04R 7/08 H04R 7/10 H04R 7/12 H04R 7/14 H04R 7/16	1-Punkt Untergruppe 2-Punkt Untergruppe 3-Punkt Untergruppe 4-Punkt Untergruppe 4-Punkt Untergruppe 2-Punkt Untergruppe 3-Punkt Untergruppe 1-Punkt Untergruppe	 instruments G10) characterised by the construction Plane diaphragms comprising a plurality of sections or layers comprising superposed layers separated by air or other fluid comprising superposed layers in contact Non-planar diaphragms or cones corrugated, pleated, or ribbed Mounting or tensioning of diaphragms or cones
H04R 7/02 H04R 7/04 H04R 7/06 H04R 7/08 H04R 7/10 H04R 7/12 H04R 7/14 H04R 7/16 H04R 7/18	1-Punkt Untergruppe 2-Punkt Untergruppe 3-Punkt Untergruppe 4-Punkt Untergruppe 4-Punkt Untergruppe 2-Punkt Untergruppe 1-Punkt Untergruppe 2-Punkt Untergruppe	 instruments G10) . characterised by the construction . Plane diaphragms comprising a plurality of sections or layers comprising superposed layers separated by air or other fluid comprising superposed layers in contact . Non-planar diaphragms or cones corrugated, pleated, or ribbed . Mounting or tensioning of diaphragms or cones at the periphery
H04R 7/02 H04R 7/04 H04R 7/06 H04R 7/08 H04R 7/10 H04R 7/12 H04R 7/14 H04R 7/16 H04R 7/18 H04R 7/20	1-Punkt Untergruppe 2-Punkt Untergruppe 3-Punkt Untergruppe 4-Punkt Untergruppe 4-Punkt Untergruppe 2-Punkt Untergruppe 1-Punkt Untergruppe 2-Punkt Untergruppe 3-Punkt Untergruppe 3-Punkt Untergruppe	instruments G10) . characterised by the construction Plane diaphragms comprising a plurality of sections or layers comprising superposed layers separated by air or other fluid comprising superposed layers in contact Non-planar diaphragms or cones corrugated, pleated, or ribbed . Mounting or tensioning of diaphragms or cones at the periphery Securing diaphragm or cone resiliently to support by flexible material, springs, cords, or strands
H04R 7/02 H04R 7/04 H04R 7/06 H04R 7/08 H04R 7/10 H04R 7/12 H04R 7/14 H04R 7/16 H04R 7/18 H04R 7/20 H04R 7/22	1-Punkt Untergruppe 2-Punkt Untergruppe 3-Punkt Untergruppe 4-Punkt Untergruppe 4-Punkt Untergruppe 2-Punkt Untergruppe 1-Punkt Untergruppe 2-Punkt Untergruppe 3-Punkt Untergruppe 3-Punkt Untergruppe 3-Punkt Untergruppe	instruments G10) . characterised by the construction Plane diaphragms comprising a plurality of sections or layers comprising superposed layers separated by air or other fluid comprising superposed layers in contact Non-planar diaphragms or cones corrugated, pleated, or ribbed . Mounting or tensioning of diaphragms or cones at the periphery Securing diaphragm or cone resiliently to support by flexible material, springs, cords, or strands Clamping rim of diaphragm or cone against seating
H04R 7/02 H04R 7/04 H04R 7/06 H04R 7/08 H04R 7/10 H04R 7/12 H04R 7/14 H04R 7/16 H04R 7/18 H04R 7/20 H04R 7/22 H04R 7/24	1-Punkt Untergruppe 2-Punkt Untergruppe 3-Punkt Untergruppe 4-Punkt Untergruppe 4-Punkt Untergruppe 2-Punkt Untergruppe 1-Punkt Untergruppe 2-Punkt Untergruppe 3-Punkt Untergruppe 3-Punkt Untergruppe 3-Punkt Untergruppe 3-Punkt Untergruppe	instruments G10) . characterised by the construction Plane diaphragms comprising a plurality of sections or layers comprising superposed layers separated by air or other fluid comprising superposed layers in contact Non-planar diaphragms or cones corrugated, pleated, or ribbed . Mounting or tensioning of diaphragms or cones at the periphery Securing diaphragm or cone resiliently to support by flexible material, springs, cords, or strands Clamping rim of diaphragm or cone against seating Tensioning by means acting directly on free portion of diaphragm or cone

Symbol	Тур	Titel
H04R 9/04	2-Punkt Untergruppe	Construction, mounting, or centering of coil
H04R 9/06	1-Punkt Untergruppe	. Loud-speakers
H04R 9/08	1-Punkt Untergruppe	. Microphones
H04R 9/10	1-Punkt Untergruppe	. Telephone receivers
H04R 9/12	1-Punkt Untergruppe	. Gramophone pick-ups using a stylus; Recorders using a stylus
H04R 9/14	2-Punkt Untergruppe	comprising two or more styli or transducers (H04R 9/16 takes precedence)
H04R 9/16	2-Punkt Untergruppe	signals being recorded or played-back by vibration of a stylus in two orthogonal directions simultaneously
H04R 9/18	1-Punkt Untergruppe	. Resonant transducers, i.e. adapted to produce maximum output at a predetermined frequency
H04R 11/00	Hauptgruppe	Transducers of moving-armature or moving-core type (acoustic diaphragm of magnetisable material directly co-acting with electromagnet H04R 13/00)
H04R 11/02	1-Punkt Untergruppe	. Loud-speakers
H04R 11/04	1-Punkt Untergruppe	. Microphones
H04R 11/06	1-Punkt Untergruppe	. Telephone receivers
H04R 11/08	1-Punkt Untergruppe	. Gramophone pick-ups using a stylus; Recorders using a stylus
H04R 11/10	2-Punkt Untergruppe	comprising two or more styli or transducers (H04R 11/12 takes precedence)
H04R 11/12	2-Punkt Untergruppe	signals being recorded or played-back by vibration of a stylus in two orthogonal directions simultaneously
H04R 11/14	1-Punkt Untergruppe	. Resonant transducers, i.e. adapted to produce maximum output at a predetermined frequency
H04R 13/00	Hauptgruppe	Transducers having an acoustic diaphragm of magnetisable material directly co-acting with electromagnet
H04R 13/02	1-Punkt Untergruppe	. Telephone receivers
H04R 15/00	Hauptgruppe	Magnetostrictive transducers (magnetostrictive elements in general H01L 41/00)
H04R 15/02	1-Punkt Untergruppe	. Resonant transducers, i.e. adapted to produce maximum output at a predetermined frequency
H04R 17/00	Hauptgruppe	Piezo-electric transducers; Electrostrictive transducers (piezo-electric or electrostrictive elements in general H01L 41/00; details of piezo-electric or electrostrictive motors, generators or positioners H02N 2/00)
H04R 17/02	1-Punkt Untergruppe	. Microphones
H04R 17/04	1-Punkt Untergruppe	. Gramophone pick-ups using a stylus; Recorders using a stylus
H04R 17/06	2-Punkt Untergruppe	comprising two or more styli or transducers (H04R 17/08 takes precedence)
H04R 17/08	2-Punkt Untergruppe	signals being recorded or played-back by vibration of a stylus in two orthogonal directions simultaneously
H04R 17/10	1-Punkt Untergruppe	. Resonant transducers, i.e. adapted to produce maximum output at a predetermined frequency
H04R 19/00	Hauptgruppe	Electrostatic transducers
H04R 19/01	1-Punkt Untergruppe	. characterised by the use of electrets [3]
H04R 19/02	1-Punkt Untergruppe	. Loud-speakers (H04R 19/01 takes precedence) [3]
H04R 19/04	1-Punkt Untergruppe	. Microphones (H04R 19/01 takes precedence) [3]
H04R 19/06	1-Punkt Untergruppe	. Gramophone pick-ups using a stylus; Recorders using a stylus (H04R 19/01 takes precedence) [3]
H04R 19/08	2-Punkt Untergruppe	comprising two or more styli or transducers (H04R 19/10 takes precedence)

Symbol	Тур	Titel
H04R 19/10	2-Punkt Untergruppe	signals being recorded or played-back by vibration of a stylus in two orthogonal directions simultaneously
H04R 21/00	Hauptgruppe	Variable-resistance transducers (gaseous-resistance transducers H04R 23/00; magneto-resistive transducers H04R 23/00)
H04R 21/02	1-Punkt Untergruppe	. Microphones
H04R 21/04	1-Punkt Untergruppe	. Gramophone pick-ups using a stylus; Recorders using a stylus
H04R 23/00	Hauptgruppe	Transducers other than those covered by groups H04R 9/00-H04R 21/00
H04R 23/02	1-Punkt Untergruppe	. Transducers using more than one principle simultaneously
H04R 25/00	Hauptgruppe	Deaf-aid sets (constructions of transducers per seH04R 9/00-H04R 23/00; structural combination
		with spectacle frames G02C 11/06; processing of speech signals G10L 21/00)
H04R 25/02	1-Punkt Untergruppe	. adapted to be supported entirely by ear
H04R 25/04	1-Punkt Untergruppe	. comprising pocket amplifiers
H04R 27/00	Hauptgruppe	Public address systems (circuits for preventing acoustic reaction H04R 3/02; circuits for distributing signals to loud-speakers H04R 3/12; amplifiers H03F)
H04R 27/02	1-Punkt Untergruppe	. Amplifying systems for the deaf
H04R 27/04	1-Punkt Untergruppe	. Electric megaphones
H04R 29/00	Hauptgruppe	Monitoring arrangements; Testing arrangements
H04R 31/00	Hauptgruppe	Apparatus or processes specially adapted for the manufacture of transducers or diaphragms therefor (processes or apparatus specially adapted for the manufacture of micro-structural devices or systems, e.g. in combination with electrical devices, B81C)