

This Class 360 is considered to be an integral part of Class 369 (see the Class 369 schedule for the position of this Class in schedule hierarchy). This Class retains all pertinent definitions and class lines of Class 369.		27	<b>RECORDING OR REPRODUCING AN INFORMATION SIGNAL AND A CONTROL SIGNAL FOR CONTROLLING ELECTRONICS OF REPRODUCER</b>
		28	.Reference carrier to control demodulator
		29	<b>MODULATING OR DEMODULATING</b>
		30	.Frequency
		31	<b>MONITORING OR TESTING THE PROGRESS OF RECORDING</b>
1	<b>RECORDING ON OR REPRODUCING FROM AN ELEMENT OF DIVERSE UTILITY</b>	32	<b>CONVERTING AN ANALOG SIGNAL TO DIGITAL FORM FOR RECORDING; REPRODUCING AND RECONVERTING GENERAL PROCESSING OF A DIGITAL SIGNAL</b>
2	.Card		
3	.Motion picture film	39	
4	<b>MANUAL INPUT RECORDING</b>	40	.In specific code or form
5	<b>RECORDING FOR SELECTIVE RETENTION OF A SPECIAL OCCURRENCE</b>	41	..Nonreturn to zero
6	<b>RECORDING COMBINED WITH METERING OR SENSING</b>	42	..Phase code
7	<b>RECORDING FOR MONETARY DELAY OF AN ANALOG SIGNAL</b>	43	..Multi-frequency
8	<b>RECORDING FOR CHANGING DURATION, FREQUENCY OR REDUNDANT CONTENT OF AN ANALOG SIGNAL</b>	44	..Intra-cell transition
12	<b>RECORDING OR REPRODUCING FOR AUTOMATIC ANNOUNCING</b>	45	.Pulse crowding correction
13	<b>RECORD EDITING</b>	46	.Head amplifier circuit
15	<b>RECORD COPYING</b>	47	.Redundant or complimentary tracks
16	.Contact transfer	48	.Data in specific format
17	..With magnetic bias	49	.Address coding
18	<b>RECORDING OR REPRODUCING PLURAL INFORMATION SIGNALS ON THE SAME TRACK</b>	50	.Inter-record gap processing
20	.Frequency multiplex	51	.Data clocking
21	.Head gap azimuth multiplex	52	..With incremental movement between record and head
22	<b>SPLITTING ONE INFORMATION SIGNAL FOR RECORDING ON PLURAL DISTINCT TRACKS OR REPRODUCING SUCH SIGNAL</b>	53	.Data verification
23	.Time division	54	.Data recirculation
24	<b>SPLITTING, PROCESSING AND RECOMBINING ONE INFORMATION SIGNAL FOR RECORDING OR REPRODUCING ON THE SAME TRACK</b>	55	<b>GENERAL RECORDING OR REPRODUCING</b>
25	<b>CHECKING RECORD CHARACTERISTICS OR MODIFYING RECORDING SIGNAL FOR CHARACTERISTIC COMPENSATION</b>	57	.Selective erase recording
26	<b>ELECTRONICALLY CORRECTING PHASING ERRORS BETWEEN RELATED INFORMATION SIGNALS</b>	58	.Boundary displacement recording or transducers
		59	.Thermomagnetic recording or transducers
		60	.Recording-or erasing-prevention
		61	.Signal switching
		62	..Record-reproduce
		63	..Between plural stationary heads
		64	..Between heads in alternate engagement with medium
		65	.Specifics of equalizing
		66	.Specifics of biasing or erasing
		67	.Specifics of the amplifier
		68	..Recording amplifier
		69	<b>AUTOMATIC CONTROL OF A RECORDER MECHANISM</b>
		70	.Synchronizing moving-head moving-record recorders
		71	.Controlling the record

72.1	..Locating specific areas	77.15	.....Plural pilot signals along single transverse path
72.2	...Responsive to recorded address	77.16	.....Having head deflection drive (e.g., piezoelectric bimorph)
72.3	...Responsive to tape transport	77.17	.....Dithering
73.01	..Speed	78.01	..Track changing
73.02	...Control of relative speed between carriers	78.02	...Tape
73.03	...Rotary carrier	78.03	....Plural tapes
73.04	...Linear carrier	78.04	...For rotary carrier (e.g., disc)
73.05	....Plural speed transport	78.05	....Coarse and fine head drive motors
73.06	.....Automatic change between fixed speeds	78.06	....Specified velocity pattern during access
73.07	.....Automatic selection of carrier or track speed	78.07	.....Controlled by memory device
73.08	.....Variable speed	78.08	....Specified spatial pattern during access
73.09	....Constant speed	78.09	....Including model of servo system or element
73.11	.....By reproduced control signal and transport derived signal	78.11	....Including nonmagnetic position sensing
73.12	.....By reproduced control signal	78.12	....Including particular head actuator
73.13	.....From separate track	78.13	.....Stepping motor
73.14	.....By signal derived from transport	78.14	....By recorded servo reference or address signal
74.1	..Stopping or reversing	78.15	....Drum
74.2	...Responsive to reel rotation	79	<b>RECORDER CONTROL OF AN EXTERNAL DEVICE</b>
74.3	...Responsive to tape tension	80	.Slide or movie projectors
74.4	...Responsive to magnetic recorded signals	81	<b>RECORD TRANSPORT WITH HEAD MOVING DURING TRANSDUCING</b>
74.5	...Responsive to physical property of record	82	.Belt record
74.6	....Photoelectric	83	.Tape record
74.7	....Conductive	84	..Rotating head
75	.Controlling the head	85	...Tape in container
76	..Azimuth or skew	86	.Disk record
77.01	..Track centering	87	.Drum record
77.02	...Rotary carrier	88	<b>RECORD TRANSPORT WITH HEAD STATIONARY DURING TRANSDUCING</b>
77.03	....By nonmagnetic sensing (e.g., optical, capacitive)	89	.Wire record
77.04	....By memory storage of repeatable error or correction	90	.Tape record
77.05	....By servo signal component from carrier surface separate from information signal bearing surface	91	..Plural tapes
77.06	....Reproduced data signal used for tracking	92.1	...Tape in container
77.07	....By tracking signal recorded on or immediately beneath surface	93	..Tape in container
77.08	.....Distinct servo sector	94	...Transport accommodates different types
77.11	.....Continuous servo signal	95	...With tape extraction
77.12	...Elongated web carrier (i.e., tape)	96.1	...Plural reels
77.13	....Transverse scan path	96.2	....With dual capstan drive
77.14	.....By pilot signal	96.3	....Reel drive details
		96.4	.....With common capstan drive
		96.51	....Container mounting details

96.61	.....With pivotal holder	224	.Disk record
97.11	.Disk record	230	<b>FLUID BEARING HEAD SUPPORT</b>
97.12	..Environmental control	231	.Tape record
97.13	...Airflow	234	.Disk record
97.14	....Having shroud	234.1	..Liquid bearing
97.15	....Having fins	234.2	..Flexible disk
97.16	....With filter	234.3	..Air bearing slider detail
97.17	.....Recirculating filter	234.4	...IC/circuit component on slider
97.18	.....External air filter	234.5	...Electrical attachment of slider/head
97.19	...Vibration or resonance suppression	234.6	...Mechanical attachment of slider to its support
97.2	....Snubber	234.7	...Head attachment to slider
97.21	..EMI shielding	234.8	....On/in side of slider
97.22	..Fluid contaminent	234.9	....In slot of rail
98.01	..Plural disks	235	....Signal winding mount/access detail
98.02	...Axially fixed flexible disks	235.1	...Slider material
98.03	....With pneumatic partitioning of disks	235.2	....Rail material
98.04	...Changer	235.3	....Body material
98.05	....Control detail	235.4	...Air bearing surface detail
98.06	....Mechanical detail	235.5	...Negative pressure type
98.07	...Rotational drive detail	235.6	....Leading end detail
98.08	...Seating of disks	235.7	....Trailing end detail
99.01	..Flexible disk	235.8	....Rail surface detail
99.02	...Loading or ejecting mechanism	235.9	....Rail side edge detail
99.03	....Motorized	236	....Cross rail detail
99.04	...Rotational drive detail	236.1	....Varying width rail
99.05	...Disk seating	236.2	....Asymmetrical rail arrangement
99.06	..Loading or ejecting mechanism	236.3	....Three or more rails/pads
99.07	..Motorized	236.4	....Leading end detail
99.08	..Rotational drive detail	236.5	....Trailing end detail
99.09	..Movable drive	236.6	....Rail surface detail
99.11	...Stationary drive	236.7	....Rail side edge detail
99.12	..Disk seating	236.8	....Varying width rail
99.13	..Removable drive cartridge	236.9	....Asymmetrical rail arrangement
99.14	..Removable hard disk cartridge	237	....Three or more rails/pads
99.15	..Housing details	237.1	....Partial contact
99.16	...Base plate	240	<b>HEAD MOUNTING</b>
99.17	....Laminated	250	.For moving head into/out of transducing position
99.18	...Cover	251	..Tape record having arcuate head retraction movement
99.19	....Laminated	251.1	..Tape record having linear head retraction movement
99.2	...Having fastening details of housing parts	251.2	...Driven by tape driver
99.21	....Sealing	251.3	...Cam type
99.22	.....Gasket	251.4	...Solenoid type
99.23	...Circuit board	251.5	...Rotary head type
99.24	....Attachment detail	254	..Disk record
99.25	....Electrical interconnector	254.1	...Flexible disk
100.1	.Drum record	254.2	...Arcuate track change type
101	<b>HEAD TRANSPORT WITH RECORD STATIONARY DURING TRANSDUCING</b>	254.3	....Moving lifter
220	<b>FLUID BEARING RECORD SUPPORT</b>		
221	.Tape record		
221.1	..Liquid bearing		

254.4	.....Lifter surface detail	266.2	...Linear head movement
254.5	.....Adjustment detail	266.3	....Electrical connection detail onto actuator arm
254.6	.....Actuator side detail	266.4	....Voice coil
254.7	....Fixed lifter	266.5	.....Carriage detail
254.8	.....Lifter surface detail	266.6	.....Guide detail
254.9	.....Adjustment detail	266.7	.....Core detail
255	.....Actuator side detail	266.8	.....Magnet detail
255.1	...Linear track change type	266.9	.....Winding detail
255.2	...Moving lifter	267	....Band
255.3	.....Lifter surface detail	267.1	....Cam
255.4	.....Adjustment detail	267.2	....Rack
255.5	.....Actuator side detail	267.3	....Screw
255.6	....Fixed lifter	267.4	.....Screw/follower detail
255.7	.....Lifter surface detail	267.5	.....Carriage detail
255.8	.....Adjustment detail	267.6	.....Guide detail
255.9	.....Actuator side detail	267.7	.....Screw mount detail
256	...Latch	267.8	.....Adjustable
256.1	....Air vane	267.9	...Including shifting head to different disks
256.2	....Magnetic	270	.For moving head during transducing
256.3	....Electrically driven	271	..Tape record having rotary head
256.4	....Inertial	271.1	...Rotating drum
256.5	....Plural latches	271.2	....Axle bearing
256.6	....Adjustment detail	271.3	.....Hydrodynamic
260	.For shifting head between tracks	271.4	....Axle seal
261	..Tape record having rotary head movement	271.5	....Head mount to drum
261.1	..Tape record having linear head movement	271.6	....Drum mounting
261.2	...Cam	271.7	....Drum motor
261.3	...Screw	271.8	...Stationary drum
264	..Disk record	271.9	....Electrical connection detail
264.1	...Arcuate head movement	272	...Power supply
264.2	....Electrical connection detail onto actuator arm	281	...Signal transfer to/from head
264.3	....Driver detail	281.1	....Transformer mounting detail
264.4	.....Independent head movement	281.2	....Transformer axis parallel to axis of head rotation
264.5	.....Plural drivers for each head	281.3	....Transformer axis perpendicular to axis of head rotation
264.6	.....Band	281.4	....Coil/winding detail
264.7	.....Voice coil	281.5	....Core detail
264.8	.....Core detail	281.6	....Electrical or magnetic shielding
264.9	.....Magnet detail	281.7	....Electrical connection between head and rotary part of transformer
265	.....Winding detail	281.8	....Plural transformers
265.1	....Limiter/stop	281.9	....Photoelectric
265.2	....Bearing	282	....Contact type transformer
265.3	.....Seal	274	..Disk record
265.4	.....Radial	290	.For adjusting head position
265.5	.....Thrust	291	..Tape record
265.6	.....Mounting detail	291.1	...Cam adjuster
265.7	....E block detail		
265.8	.....Detail of coil support		
265.9	.....Detail of actuator arm supporting head suspension		
266	.....Arm shape		
266.1	.....Arm mounting		

291.2	...Screw adjuster	246.6	..Plural heads for each disk side
291.3	....Plural screws	246.7	...Plural actuators
291.4	..Rotary head	246.8	..Offset heads on opposite sides of disk
291.5	....Adjustment of drum axis	110	<b>HEAD</b>
291.6	....Adjustable head mount	111	.Flux gate
291.7	.....Adjuster core detail	112	.Hall effect
291.8	.....Adjuster coil detail	313	.Magnetoresistive (MR) reproducing head
291.9	.....Piezoelectric adjuster	314	..Having multiple interconnected multiple film MR sensors (e.g., dual spin valve magnetoresistive sensor)
292	.....Plural piezoelectric adjusters	315	..Having multiple interconnected single film MR sensors (e.g., dual magnetoresistive sensor)
294	..Disk record	316	..Having multiple independent MR sensors
294.1	..Adjustment parallel to disk plane	317	..Combined with inductive write head in piggyback/merged configuration
294.2	....Linear adjustment	318	..Combined with inductive write head and having MR inside of inductive head
294.3	....Driver detail	318.1	...In horizontal head configuration
294.4	.....Piezoelectric adjuster	319	..Detail of magnetic shielding
294.5	.....Voice coil adjuster	320	..Detail of head insulation
294.6	....Pivot structure detail	321	..Having flux guide detail
294.7	..Adjustment along rotational axis of disk	322	..Detail of sense conductor
241	.Tape record	323	..Electrostatic Discharge (ESD) protection
241.1	..Plural head mounting on only one tape side	324	..Having Giant Magnetoresistive (GMR) or Colossal Magnetoresistive (CMR) sensor formed of multiple thin films
241.2	..Plural head mounting on opposite tape sides	324.1	...Having one film pinned (e.g., spin valve)
241.3	..Head urging detail	324.11	...Detail of pinned film or additional film for affecting or biasing the pinned film
244	.Disk record	324.12	...Detail of free layer or additional film for affecting or biasing the free layer
244.1	..IC/circuit component on suspension element	324.2	...Having tunnel junction effect
244.2	..Load beam detail	325	..Having Anisotropic Magnetoresistive (AMR) sensor formed of multiple thin films
244.3	...Laminated beam	326	..Having Giant Magnetoresistive (GMR) or Colossal Magnetoresistive (CMR) sensor formed of a single thin film
244.4	...Nonmetallic beam	327	..Having Anisotropic Magnetoresistive (AMR) sensor formed of a single thin film
244.5	..Actuator mount region detail		
244.6	....Ball staking		
244.7	....Adhesive		
244.8	...Spring region detail		
244.9	...Rigid intermediate section detail		
245	...Gimbal mounting region detail		
245.1	....Pivot/load button detail		
245.2	...Assembly feature		
245.3	..Gimbal detail		
245.4	..Attachment detail		
245.5	...Integral with load beam		
245.6	...Plural axis components		
245.7	...Motion limiter detail		
245.8	..Electrical connection detail		
245.9	..Flexible printed circuit type		
246	...Noise reduction		
246.1	..Full contact suspension		
246.2	...Slider detail		
246.3	...Pivot detail		
246.4	...Gimbal detail		
246.5	...Single head		

327.1	...Detail of transverse and longitudinal biasing	123.06	...Configuration detail
327.11	....In barber-pole configuration	123.07	....Nonuniform trace spacing
327.2	...Detail of transverse biasing	123.08	....Trace cross section shape
327.21	....Using a shunt	123.09	...Insulation detail
327.22	....Using a soft adjacent layer	123.1	...Electrical connection detail
327.23	....Using a permanent magnet	123.11	...Plural separate coils
327.24	....Using conductor	123.12	...Shielding/protection
327.3	...Detail of longitudinal biasing	123.13	..For longitudinal recording head
327.31	....Using a permanent magnet	123.14	...Pancake type
327.32	....Using exchange couple biasing	123.15	....Plural coil layers
327.33	....Using conductor	123.16	....Insulation detail
328	.Magnetostrictive head	123.17	...Plural separate coils
114.01	..Read only detector using light for reading magnetically recorded information on tape	123.18	...Single plane coil
114.02	..Light beam generator detail	123.19	....Configuration detail
114.03	...Focus detail	123.2	....Trace cross section shape
114.04	..Beam splitter detail	123.21	....Trace spacing
114.05	..Readout detector detail	123.22	....Coil spacing from storage medium
114.06	...Focus detail	123.23	....Coil spacing from plane of gap
114.07	...Circuit detail	123.24	....Seed layer
114.08	...Detector material detail	123.25	....Insulation detail
114.09	..Mounting detail	123.26	....Zero throat height detail
114.1	..Rotary head	123.27	....Apex angle
115	.Flux scanning	123.28	....Plural layers
116	.Cathode ray	123.29	.....Diverse materials
117	.Hand-held	123.3	.....Planarizing layer
118	.Erase	123.31	.....Below coil
121	.Plural gaps	123.32	.....Above coil
119.01	.Gap spacer	123.33	.....Between traces
119.02	..For perpendicular recording head	123.34	.....Between coil and medium
119.03	...Laminated spacer	123.35	...Plural diverse layers
119.04	...Configuration detail	123.36	...Electrical connection detail
119.05	..For longitudinal thin film recording head	123.37	...Shielding/protection
119.06	...Pancake type	123.38	...Plural plane coil
119.07	...Laminated spacer	123.39	...Intercoil layer electrical connection detail
119.08	....With thermally conductive material	123.4	...Configuration detail
119.09	....With diffusion barrier	123.41	....Trace cross section shape
119.1	....Three or more layers	123.42	....Trace spacing
119.11	...Configuration detail	123.43	....Coil spacing from storage medium
119.12	....Nonuniform width transducing face	123.44	....Coil spacing from plane of gap
119.13	....Nonuniform width vertically	123.45	...Seed layer
122	.Head surface structure	123.46	...Insulation detail
123.01	.Coil	123.47	....Zero throat height detail
123.02	..For perpendicular recording head	123.48	....Apex angle
123.03	...Location	123.49	....Plural layers
123.04	....On return pole	123.5	.....Diverse materials
123.05	....On main/recording pole	123.51	.....Planarizing layer
		123.52	.....Below coil
		123.53	.....Above coil
		123.54	.....Between traces

123.55	.....Between coil and medium	125.38	...Substrate
123.56	....Plural diverse layers	125.39	....Laminated
123.57	....Electrical connection detail	125.4	....Nonuniform thickness vertically
123.58	....Shielding/protection	125.41	...Pole adjacent substrate
123.59	...Location	125.42	....Zero throat height detail
123.6	....Coil around pole adjacent substrate	125.43	....Separate pole tip
123.61	....Coil around pole remote from substrate	125.44	.....Junction detail
125.01	..Core	125.45	.....Laminated
125.02	..Perpendicular recording head	125.46	.....Nonuniform width transducing face
125.03	...Main/recording pole	125.47	.....Nonuniform width vertically
125.04	....Plural poles	125.48	.....Nonuniform thickness vertically
125.05	....Offset from track centerline	125.49	.....Projecting
125.06	....Separate pole tip	125.5	....Laminated
125.07	.....Junction detail	125.51	....Nonuniform width transducing face
125.08	.....Laminated	125.52	....Nonuniform width vertically
125.09	.....Nonuniform width transducing face	125.53	....Nonuniform thickness vertically
125.1	.....Nonuniform width vertically	125.54	...Pole remote from substrate
125.11	.....Nonuniform thickness vertically	125.55	....Zero throath height detail
125.12	....Laminated	125.56	....Separate pole tip
125.13	....Nonuniform width transducing face	125.57	.....Junction detail
125.14	....Nonuniform width vertically	125.58	.....Laminated
125.15	....Nonuniform thickness vertically	125.59	.....Nonuniform width transducing face
125.16	...Return pole	125.6	.....Nonuniform width vertically
125.17	....Plural poles	125.61	.....Nonuniform thickness vertically
125.18	....Offset from track centerline	125.62	.....Projecting
125.19	....Nonuniform width transducing face	125.63	....Laminated
125.2	....Nonuniform width vertically	125.64	....Nonuniform width transducing face
125.21	....Nonuniform thickness vertically	125.65	....Nonuniform width vertically
125.22	....Separate pole tip	125.66	....Nonuniform thicknes vertically
125.23	.....Junction detail	125.67	...Coupling section
125.24	.....Laminated	125.68	....Junction detail
125.25	.....Configuration detail	125.69	....Laminated
125.26	....Laminated	125.7	....Nonuniform cross section
125.27	...Coupling section	125.71	...Accessory feature
125.28	....Laminated	125.72	....Protective structure
125.29	....Junction detail	125.73	.....Laminated
125.3	...Accessory feature	125.74	....Heat generating structure
125.31	....Heat generating structure	125.75	....Heat transfer structure
125.32	....Heat transfer structure	128	..Head accessory
125.33	..Thin film longitudinal recording head	129	..Housing
125.34	...Pancake type	130.1	..Record separator
125.35	....Core section adjacent medium	130.2	..Record guide
125.36	....Back core section remote from medium	130.21	...Tape record
125.37	....Coupling section	130.22	....Rotating head
		130.23	.....Helical scan

130.24 .....Head drum details  
 130.3 ..Pressure element  
 130.31 ...Tape record  
 130.32 ....Element mounting details  
 130.33 ....Element in tape container  
 130.34 ...Disc record  
 131 **RECORD MEDIUM**  
 132 ..In container  
 133 ..For disk  
 134 ..Tape  
 135 ..Disk  
 136 ..Drum  
 137 **MISCELLANEOUS**

FOR 209 .For adjusting head position  
 (360/109)  
 FOR 213 **MAGNETORESISTIVE OR  
 MAGNETOSTRICTIVE HEAD (360/  
 113)  
 HEAD (340/110)**  
 FOR 214 .Magneto optic (360/114)  
**RECORD TRANSPORT WITH HEAD  
 STATIONARY DURING TRANSDUCING  
 (360/88)**  
 .Tape record  
 ..Plural tapes  
 FOR 215 ...Tape in container (360/92)  
 ..Tape in container  
 ...Plural reels  
 FOR 216 ....Tape in container (360/96.5)  
 FOR 217 .....With pivotal holder (360/  
 96.6)

#### CROSS-REFERENCE ART COLLECTIONS

900 **DISK DRIVE PACKAGING**  
 901 ..Access time  
 902 ..Storage density (e.g., bpi, tpi)  
 903 ..Physical parameter (e.g., form  
 factor)  
 904 ..Weight

**HEAD**  
 FOR 218 .Gap structure details (360/119)  
 FOR 219 ..Spacer material (360/120)  
 FOR 220 .Head winding (360/123)  
 FOR 221 ..For cross-talk prevention (360/  
 124)  
 FOR 222 .Head core (360/125)  
 FOR 223 ..Laminated (360/126)  
 FOR 224 ..Nonmetallic (360/127)

#### FOREIGN ART COLLECTIONS

##### FOR 000 **CLASS-RELATED FOREIGN DOCUMENTS**

Any foreign patents or non-patent literature from subclasses that have been reclassified have been transferred directly to FOR Collections listed below. These Collections contain ONLY foreign patents or non-patent literature. The parenthetical references in the Collection titles refer to the abolished subclasses from which these Collections were derived.

**RECORD TRANSPORT WITH HEAD  
 STATIONARY DURING TRANSDUCING  
 (360/88)**  
 FOR 225 .Disk record (360/97.01)  
 FOR 226 ..Environmental control (e.g.,  
 air filter, temperature  
 control) (360/97.02)  
 FOR 227 ...Plural disks (360/97.03)  
 FOR 228 ...Flexible disk (360/97.04)

FOR 202 **FLUID BEARING HEAD (360/102)**  
 FOR 203 .Flying head (360/103)  
 FOR 204 **HEAD MOUNTING (360/104)**  
 FOR 205 .For moving head into and out of  
 transducing position (360/105)  
 FOR 206 .For shifting head between tracks  
 (360/106)  
 FOR 207 .For moving head during  
 transducing (360/107)  
 FOR 208 ..Signal transfer to and from  
 head (360/108)