1 **PLURAL CHANNEL SYSTEMS**
1.1 .Nonreciprocal gyromagnetic type (e.g., circulators)
2 .With automatic control
3 ..Line substitution
4 .With balanced circuits
5 ..Plural balanced circuits
100 .Having branched circuits
101 ..Including switching means
102 ...Having gyromagnetic operating means
103 ...Having semiconductor operating means
104 ....Using TEM lines
105 ...Having mechanical switching means
106 ....Using rotary switching means
107 .....For TEM lines
108 ....For waveguide
109 ..Using directional coupler
110 ...For providing frequency separation
111 ...For providing adjustable coupling
112 ...Having lumped parameters or impedances
113 ...Having parallel-guide waveguide
114 ...Having crossed-guide waveguide
115 ...Having TEM lines
116 ....Using stripline
117 ..Including hybrid-type network
118 ...Having lumped parameters or impedances
119 ....Using transformer coil
120 ...Having hybrid ring junction
121 ...Having hybrid-T (e.g., magic-T)
122 ....Using waveguide
123 ...Having coaxial element
124 ..With impedance matching
125 ...Including long line element
126 ....For providing frequency separation
127 ....Using TEM lines
128 .....Stripline
129 ...For providing frequency separation
130 ...Using resistors only
131 ...Using coupled windings
132 ..For providing frequency separation
133 ...Utilizing electromechanical transducer
134 ...Utilizing long line element
135 ....Including waveguide element
136 ..Including long line element
137 ...Using waveguide
12 **TRANSMISSION LINE INDUCTIVE OR RADIATION INTERFERENCE REDUCTION SYSTEMS**
13 **RESONATOR-TYPE BREAKDOWN DISCHARGE SYSTEMS (E.G., T-R OR R-T SYSTEMS)**
14 **AMPLITUDE COMPRESSION AND EXPANSION SYSTEMS (I.E., COMPANDERS)**
15 **PILOT LINE-CONTROLLED SYSTEMS**
16 **PILOT CURRENT-CONTROLLED SYSTEMS**
17.1 **AUTOMATICALLY CONTROLLED SYSTEMS**
17.2 .Limiting of amplitude
17.3 .Impedance matching
18 .With control of equalizer and/or delay network
19 **DIFFERENTIATING OR INTEGRATING SYSTEMS**
20 **WAVE-SHAPING**
21 R **WAVE MODE CONVERTERS**
21 A .Polarization converters
22 R **DISSIPATING TERMINATIONS FOR LONG LINES**
22 F .Fluid-cooling
23 **ARTIFICIAL LINES**
24 R **COUPLING NETWORKS**
24.1 .Nonreciprocal gyromagnetic type (e.g., directional phase shifters)
24.2 ..Nonreciprocal attenuators or isolators
24.3 ..Nonreciprocal polarization rotators
25 .Balanced to unbalanced circuits
26 ..Having long line elements
27 .Interlinking long line
28 R .Equalizers
28 T ..Audio tone control
138 .Delay lines including a lumped parameter
139 ..Variable parameter
140 ..Physical structure
141 .Delay lines including elastic bulk wave propagation means
142 ..Multipath propagation
143 ...Spurious signal reduction
144 ..Variable delay

145 ..Nonuniform propagation path
146 ..Helical propagation path
147 ..Propagation path has significant chemical or physical properties
148 ..Including magnetostrictive transducers
149 ..Significant transducer structure
150 .Delay lines including elastic surface wave propagation means
151 ..Spurious signal or mode cancellation means
152 ..Variable delay
153 ..Including discontinuities within propagation means
154 ..Significant transmitting or receiving transducer structure
155 ..Temperature stabilization or compensation
156 .Delay lines including long line elements
157 ..Waveguide
158 ...Including ferrite means
159 ...Having mechanically movable delay control means
160 ..Coaxial line
161 ..Planar line structure (e.g., stripline)
162 ..Helical line structures and lines developed from a helical structure
163 ...Having plural concentric helices
164 ..Control of delay with semiconductive means
32 .With impedance matching
33 ..Having long line elements
34 ...Tapered
35 ...Quarter-wave transformer type
165 .Frequency or time domain filters and delay lines utilizing charge transfer devices
166 .Time domain filters
167 .Frequency domain filters utilizing only lumped parameters
168 ..Including recurrent sections
169 ..Wheatstone or lattice type
170 ..Bridge type
171 ...With variable response
172 ..RC or RL type
173 ..Synchronous filters
174 ..With variable response
175 ..Resonant, discrete frequency selective type
176 ...Including specific frequency rejection means
177 ..Transformer coupled
178 ...Including bandwidth adjusting, shaping, or stabilization means
179 ...With permeability tuning means
180 ...With variable coupling means
181 ..Smoothing type (e.g., direct current power supply filters or decoupling filters)
182 ...Feedthrough type
183 ....Resiliently mounted components
184 ...Monolithic structure
185 ..Having significant physical structure
186 .Electromechanical filter
187 ..Using bulk mode piezoelectric vibrator
188 ...With means for varying response
189 ...Plural coupled vibrators
190 ....Lattice structure
191 ....Monolithic structure
192 .....With electrical coupling
193 ..Using surface acoustic waves
194 ...Including spurious signal prevention or reduction means
195 ...With wave-modifying means (e.g., reflectors, resonators, diffractors, multistrip couplers, etc.)
196 ...With response weighting means
197 ..Plural mechanically coupled bar, plate, or rod-type resonating means
198 ...Plural interresonator coupling paths
199 ...Plural mechanically coupled disk resonators
200 ..Reed- or fork-type resonators
201 ..Magnetostrictive wave transmission path
202 .Wave filters including long line elements
203 ..Digital structure
204 ..Stripline or microstrip
205 ...Tunable
206 ..Coaxial

207 ...Tunable
208 ..Waveguide
209 ...Tunable
210 ...Including evanescent guide sections
211 ...Including frequency selective absorbing means
212 ...Including directly coupled resonant sections
24 C .Capacitive coupling
213 **NEGATIVE RESISTANCE OR REACTANCE NETWORKS OF THE ACTIVE TYPE**
214 .Simulating specific type of reactance
215 ..Using gyrator
216 .Having negative impedance
217 ..Providing negative resistance
81 R **ATTENUATORS**
81 A .Coaxial or microstrip
81 B .Waveguide type
218 **FREQUENCY MULTIPLIERS**
219 **RESONATORS (DISTRIBUTED PARAMETER TYPE)**
219.1 .Dielectric type
219.2 .Magnetic type
220 .Open wire or Lecher line
221 ..With tuning
222 .Coaxial or shielded
223 ..With tuning
224 ...Having movable element
225 ....Using movable shorting means
226 ....Using plunger, rod, or piston
227 .Cavity resonator
228 ..With mode suppressor
229 ..With temperature compensation
230 ..With coupling
231 ..With tuning
232 ...Having movable element
233 ....Using movable wall
234 .Temperature compensated
235 .With tuning
236 **LONG LINES**
237 .Leaky lines
238 .Strip type
239 .Waveguide type
240 ..Surface wave
241 ..Flexible
242 ..Circular or helical structure
243 .Shielded type
244 ..Including spaced, electrically compensated, internal support means
245 **LONG LINE ELEMENTS AND COMPONENTS**
246 .Strip type
247 ..Semiconductor mounts
248 .Waveguide elements and components
249 ..Bend
250 ..Active element mounting
251 ..Mode suppressor
252 ..Window
253 ..Including variable impedance
254 ..Connectors and interconnections
255 ...Quick disconnect
256 ...Movable
257 ....In line
258 ..Switch
259 ...Mechanically movable
260 .Connectors and interconnections
261 ..Rotary coupling
262 .Switch
263 .Including variable impedance
99 R **MISCELLANEOUS**
99 S .Superconductive
99 PL .Plasma
99 MP .Multipactor applications

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