

# AUDIO IC'S

## Low Noise Preamplifiers

Type No.	Use	Circuit Description	Supply Voltage (V)	Electrical Characteristics	Package Outline																								
$\mu$ PC566H	Car stereo set Cassette-tape recorder Home stereo set	<ul style="list-style-type: none"> <li>2-stage amplifier with high input impedance</li> <li>Emitter-follower output</li> </ul>	4~12	$(T_a = 25^\circ\text{C}, V_{CC} = 7\text{V}, f = 1\text{kHz}, R_L = 22\text{k}\Omega)$ $I_{CC}$ 1~1.35 ~1.7 (mA) $A_{vo}$ 67~71 ~ (dB) $A_v$ 38.5~ ~43.5 (dB) $R_{NF} = 22\text{k}\Omega$ $V_{OM}$ 1.2~1.5 ~ (V) NAB $V_{nin}$ ~1.4 ~2.0 ( $\mu\text{V}$ ) NAB, $R_G = 2.2\text{k}\Omega$	7-pin SIP Ⓐ																								
$\mu$ PC566H3	Car stereo set Cassette-tape recorder Home stereo set	<ul style="list-style-type: none"> <li>2-stage amplifier with high input impedance</li> <li>Emitter-follower output</li> </ul>	4~13	$(T_a = 25^\circ\text{C}, V_{CC} = 8\text{V}, f = 1\text{kHz}, R_L = 22\text{k}\Omega)$ $I_{CC}$ 1.2~1.5 ~1.9 (mA) $A_{vo}$ 67~72.5 ~ (dB) $A_v$ 41.5~ ~46.5 (dB) $R_{NF} = 22\text{k}\Omega$ $V_{OM}$ 1.2~1.75 ~ (V) NAB $V_{nin}$ ~1.2 ~2.0 ( $\mu\text{V}$ ) NAB, $R_G = 2.2\text{k}\Omega$	7-pin SIP Ⓐ																								
$\mu$ PC573C	Cassette-tape recorder Tape recorder	Contains four circuit blocks: Differential-type AGC amp., 2-stage direct coupled tone amp. with emitter follower output stage, Recording amp., and Level meter amp.	3~9	$(T_a = 25^\circ\text{C}, V_{CC} = 6\text{V}, f = 1\text{kHz})$ $I_{CC}$ 5~7 ~10 (mA) <table border="1"> <tr> <td rowspan="4">Tone Amp</td> <td><math>A_{vo}</math></td> <td>56~60 ~ (dB)</td> <td rowspan="4"><math>R_{NF} = 120\Omega</math> <math>R_{NF} = 120\Omega</math> <math>R_{NF} = 120\Omega</math> <math>R_G = 10\text{k}\Omega/470\text{pF}</math></td> </tr> <tr> <td><math>A_v</math></td> <td>46~50 ~54 (dB)</td> </tr> <tr> <td><math>V_{OM}</math></td> <td>0.8~1.4 ~ (V)</td> </tr> <tr> <td><math>V_{nin}</math></td> <td>~3.0 ~5.0 (<math>\mu\text{V}</math>)</td> </tr> <tr> <td rowspan="3">Rec. Amp</td> <td><math>A_{vo}</math></td> <td>66~72 ~ (dB)</td> <td rowspan="3"><math>R_{NF} = 39\Omega</math> <math>R_{NF} = 39\Omega</math> <math>R_{NF} = 39\Omega</math> <math>R_G = 10\text{k}\Omega/470\text{pF}</math></td> </tr> <tr> <td><math>A_v</math></td> <td>56~60 ~64 (dB)</td> </tr> <tr> <td><math>V_{OM}</math></td> <td>0.8~1.4 ~ (V)</td> </tr> <tr> <td rowspan="2">Meter Amp</td> <td><math>A_v</math></td> <td>12~14.5 ~17 (dB)</td> <td rowspan="2"></td> </tr> <tr> <td><math>V_{OM}</math></td> <td>1.0~1.7 ~ (V)</td> </tr> </table> $AGC$ 35~44 ~ (dB)	Tone Amp	$A_{vo}$	56~60 ~ (dB)	$R_{NF} = 120\Omega$ $R_{NF} = 120\Omega$ $R_{NF} = 120\Omega$ $R_G = 10\text{k}\Omega/470\text{pF}$	$A_v$	46~50 ~54 (dB)	$V_{OM}$	0.8~1.4 ~ (V)	$V_{nin}$	~3.0 ~5.0 ( $\mu\text{V}$ )	Rec. Amp	$A_{vo}$	66~72 ~ (dB)	$R_{NF} = 39\Omega$ $R_{NF} = 39\Omega$ $R_{NF} = 39\Omega$ $R_G = 10\text{k}\Omega/470\text{pF}$	$A_v$	56~60 ~64 (dB)	$V_{OM}$	0.8~1.4 ~ (V)	Meter Amp	$A_v$	12~14.5 ~17 (dB)		$V_{OM}$	1.0~1.7 ~ (V)	16-pin DIP Ⓝ
Tone Amp	$A_{vo}$	56~60 ~ (dB)	$R_{NF} = 120\Omega$ $R_{NF} = 120\Omega$ $R_{NF} = 120\Omega$ $R_G = 10\text{k}\Omega/470\text{pF}$																										
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Meter Amp	$A_v$	12~14.5 ~17 (dB)																											
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$\mu$ PC592H2	Car stereo set Cassette-tape recorder Home stereo set	<ul style="list-style-type: none"> <li>2-stage amplifier with high input impedance</li> </ul>	5~13	$(T_a = 25^\circ\text{C}, V_{CC} = 8\text{V}, f = 1\text{kHz}, R_L = 5.1\text{k}\Omega)$ $I_{CC}$ 0.7~1.3 ~1.9 (mA) $A_{vo}$ 75~79 ~83 (dB) $A_v$ 46.5~49.5 ~52.5 (dB) $R_{NF} = 35\text{k}\Omega$ $V_{OM}$ 1.0~1.3 ~ (V) $R_{NF} = 35\text{k}\Omega$ $V_{nin}$ ~1.5 ~2.0 ( $\mu\text{V}$ ) $R_G = 2.2\text{k}\Omega$ , NAB = 35dB $V_{pin}$ ~1.2 ~ ( $\mu\text{V}$ ) $R_G = 2.2\text{k}\Omega$ , NAB = 51dB	7-pin SIP Ⓐ																								
$\mu$ PC1016C	Stereo set Stereo tape deck	<ul style="list-style-type: none"> <li>High impedance differential input</li> <li>3-stage amplifier</li> <li>Complementary output</li> <li>Dual channel</li> <li>Single or dual power supply operation</li> </ul>	$\pm 8 \sim \pm 16$	$(T_a = 25^\circ\text{C}, V_{CC} = \pm 12\text{V}, f = 1\text{kHz}, R_L = 10\text{k}\Omega)$ $I_{CC}$ 2.0~3.3 ~5.0 (mA) $A_{vo}$ 85~100 ~ (dB) $A_v$ 32.2~32.5 ~32.7 (dB) RIAA $V_{OM}$ 7.0~7.7 ~ (V) RIAA $T.H.D.$ ~0.02 ~0.1 (%) RIAA, $V_O = 3\text{V}$ $R_i$ ~420 ~ ( $\text{k}\Omega$ ) $V_{nin}$ ~0.7 ~1.3 ( $\mu\text{V}$ ) RIAA, $R_G = 2.2\text{k}\Omega$ $NF$ ~1.8 ~ (dB) $R_G = 10\text{k}\Omega$ , $f = 10\text{Hz}$ $C.S$ ~-90 ~ (dB) $R_G = 2.2\text{k}\Omega$ , $V_O = 6\text{V}$	14-pin DIP Ⓒ																								
$\mu$ PC1023H	Stereo set Cassette-tape recorder	<ul style="list-style-type: none"> <li>Direct coupled 2-stage amplifier</li> <li>Common emitter output stage</li> </ul>	30~40	$(T_a = 25^\circ\text{C}, V_{CC} = 35\text{V}, f = 1\text{kHz}, R_L = 47\text{k}\Omega)$ $I_{CC}$ ~3.5 ~6.0 (mA) $A_{vo}$ 87~92 ~ (dB) $A_v$ 38.5~42.5 ~ (dB) $R_{NF} = 22\text{k}\Omega$ $V_{OM}$ 7.0~ (V) $T.H.D.$ ~0.015~ (%) RIAA, $V_O = 5\text{V}$ $R_i$ 78~100 ~ ( $\text{k}\Omega$ ) $V_{nin}$ ~0.7 ~1.3 ( $\mu\text{V}$ ) RIAA, $R_G = 2.2\text{k}\Omega$ $NF$ ~1.8 ~ (dB) $R_G = 10\text{k}\Omega$ , $f = 10\text{Hz}$	7-pin SIP Ⓐ																								

## Hearing Aid IC

Type No.	Use	Circuit Description	Supply Voltage (V)	Electrical Characteristics	Package Outline
$\mu$ PC12G	Hearing aid	4-stage high gain low noise amplifier	1.3	$(T_a = 25^\circ\text{C}, V_{CC} = 1.3\text{V}, f = 1\text{kHz})$ $I_{CC}$ 0.8~1.5 ~3.2 (mA) $R_a = 33\text{k}\Omega$ $A_{vo}$ 75~82 ~ (dB) $V_i = 10\mu\text{V r.m.s.}$ $NL$ ~2.5 (mV) $A_v = 75\text{dB}$ $V_{OM}$ ~450 ~ (mV) $I_{c4} = 1.4\text{mA}$ clipping point	10-pin flat Package Ⓔ