libAHetech Reference Manual

0.1

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- file MiscOpCreat.h
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- file NoneInvAmp.h
- file OpAmp.h
- file OpAmpCreator.h
- file PhysConst.h
- file PhysUnit.h
- file PickUp.h
- file Power.h
- file Resistor.h
- file Riaa.h
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- file Speaker.h
- file SpeakerCreator.h
- file TransFollow.h
- file Transistor.h
- file Types.h
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- file Version.h
- file VierPol.h
- file VisatonSpeakers.h
- file Voltage.h

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libAHetech Namespace Documentation

7.1 AH Namespace Reference

7.2 Ah Namespace Reference

Classes

- class Cplx
  declaration of a complex number
- class Amplifier
  pure virtual generic amplifier base class
- class AD711
  represents the operational amplifier AD711
- class AD745
  represents the ultra low noise operational amplifier AD745
- class AD797
  represents the ultra low noise operational amplifier AD797
- class AD845
  represents the fast precision operational amplifier AD845
- class AnalogDevOpAmpCreator
  represents the creator class for Analog Devices operational amplifiers
- class Box
  represents a loudspeaker box
- class BPT
  represents a bipolar transistor
- class OPA134
  represents the Sound-Plus operational amplifier OPA134
- class OPA604
  represents the audio operational amplifier OPA604
- class BurrBrownOpAmpCreator
  represents the creator class for Burr-Brown operational amplifiers
- class Capacitor
  represents an ideal electrical capacitor
- class ClosedBox
  represents a closed loudseaker box
- class Current
  represents an electrical current
- class Divider

represents a voltage divider

- class FET

  represents a FET

- class Filter2PoleInv

  2-pole filter using multiple feedback on inverting amplifier

- class FreqImpedance

  represents an frequency dependent electrical impedance base class

- class Impedance

  represents an electrical impedance

- class Inductor

  represents an ideal electrical inductor

- struct IntPolData
- class IntPol

  represents a pure virtual interpolation class

- class IntPolLin1Lin2

  represents a linear interpolation class

- class IntPolLog1Lin2

  represents a logarithmic interpolation class

- class InvAmp

  represents an inverting amplifier

- class Kef_B110_A

  represents the speaker KEF B 110 SP 1003

- class Kef_B110_B

  represents the speaker KEF B 110 SP 1057

- class Kef_B200_A

  represents the speaker KEF B 200 SP 1014

- class Kef_B200_B

  represents the speaker KEF B 200 SP 1039

- class Kef_B139_B

  represents the speaker KEF B 139 SP 1044

- class Kef_B300_B

  represents the speaker KEF B 300 SP 1071

- class LT1028

  represents the very fast high precision operational amplifier LT1028

- class LT1115
  represents the audio operational amplifier LT1115
- class LinTechOpAmpCreator
  represents the creator class for Linear Technology operational amplifiers
- class MathConst
  represents some mathical constants
- class LM833
  represents the audio operational amplifier LM833
- class NE5532
  represents the audio operational amplifier NE5532
- class OP07
  represents the industry standard precision operational amplifier OP07
- class OP27
  represents the fast industry standard precision operational amplifier OP27
- class OP37
  represents the very fast industry standard precision operational amplifier OP37
- class OP77
  represents the industry standard high precision operational amplifier OP77
- class OP177
  represents the industry standard high precision operational amplifier OP177
- class MiscOpAmpCreator
  represents the OpAmp creator class
- class Monacor_SP45_4
  represents the speaker Monacor SP-45/4
- class Monacor_SP45_8
  represents the speaker Monacor SP-45/8
- class Monacor_SP60_4
  represents the speaker Monacor SP-60/4
- class Monacor_SP60_8
  represents the speaker Monacor SP-60/8
- class Monacor_SPP110_4
  represents the speaker Monacor SPP-110/4
- class Monacor_SPP110_8

represents the speaker Monacor SPP-110/8

- class NoneInvAmp

  represents a none inverting amplifier

- class OpAmp

  represents an operational amplifier

- class OpAmpCreator

  represents the OpAmp creator class

- class PhysConst

  represents some physical constants

- class PhysUnitDbl

  represents a scalar physical unit

- class PhysUnitCplx

  represents a complex physical unit

- class PickUp

  represents a pickup of a record player

- class PickUpOrtofon540mk2

  Ortofon 540 MK2 (example supplied by Frank Klemm in drmh).

- class PickUpVdhDDT2Special

  Van den Hul DDT II Special (data supplied by Frank Klemm).

- class PickUpVdhFrogCopper

  Van den Hul Frog Copper (data supplied by Frank Klemm).

- class PickUpVdhBlackBeautySPX

  Van den Hul Black Beauty SPX (data supplied by Frank Klemm).

- class PickUpVdhColibriXGP

  Van den Hul The Colibri XGP (data supplied by Frank Klemm).

- class PickUpClearaudioAlphaWood

  Clearaudio Alpha Wood (data supplied by Frank Klemm).

- class PickUpClearaudioVirtuosoWood

  Clearaudio Virtuoso Wood (data supplied by Frank Klemm).

- class PickUpClearaudioGammaSGold

  Clearaudio Gamma S Gold (data supplied by Frank Klemm).

- class PickUpClearaudioDiscovery

  Clearaudio Discovery (data supplied by Frank Klemm).

- class PickUpGradoPlatinum
  Grado Platinum (data supplied by Frank Klemm).
- class PickUpGradoMaster
  Grado Master (data supplied by Frank Klemm).
- class PickUpGradoReference
  Grado Reference (data supplied by Frank Klemm).
- class PickUpGradoStatement
  Grado The Statement (data supplied by Frank Klemm).
- class Power
  represents an electrical power
- class Resistor
  represents an ideal electrical resistor
- class SalKey
  Sallen-Key Filter.
- class Speaker
  represents a pure speaker system
- class SpeakerCreator
  represents the speaker creator class
- class TransistorFollower
  represents a generic transistor follower
- class Transistor
  represents a generic transistor
- class PickUpVdhMc1Special
  Van den Hul MC-1 Special.
- class PickUpVdhMm1
  Van den Hul MM-1.
- class VierPol
- class VierPolZ
- class VierPolY
- class VierPolH
- class VierPolA
- class Visaton_SC_10
  represents the speaker VISATON SC 10
- class Voltage
  represents an electrical voltage

Typedefs

- typedef double Dbl
  declaration of a scalar number
- typedef std::complex< double > double_complex

Functions

- Impedance operator/ (const Voltage &u, const Current &i)
  overloaded operator / for division of { Voltage} / { Current}
- Voltage operator * (const Impedance &r, const Current &i)
  *overloaded operator * for multiplication of { Impedance} * { Current}*
- Voltage operator * (const Current &i, const Impedance &r)
  *overloaded operator * for multiplication of { Current} * { Impedance}*
- Voltage operator/ (const Power &p, const Current &i)
  overloaded operator / for division of { Power} / { Current}
- Current operator/ (const Voltage &u, const Impedance &r)
  overloaded operator / for division of { Voltage} / { Impedance}
- Current operator * (const Power &p, const Voltage &u)
  overloaded operator / for division of { Power} / { Voltage}
- Power operator * (const Voltage &u, const Current &i)
  *overloaded operator * for multiplication of { Voltage} * { Current}*
- Power operator * (const Current &i, const Voltage &u)
  *overloaded operator * for multiplication of { Current} * { Voltage}*
- Dbl inVdB (Dbl x)
  return value in voltage decibel
- Dbl inPdB (Dbl x)
  return value in power decibel
- Dbl inDeg (Dbl x)
  return phase argument in degree
- Cplx CdPreEmphasis (Dbl f)
  return CD preemphasis value at frequency { f}
- Cplx CdDeEmphasis (Dbl f)
  return CD deemphasis value at frequency { f}
- Cplx RiaaPreEmphasis (Dbl f)
  return RIAA preemphasis value at frequency { f}

- Cplx RiaaDeEmphasis (Dbl f)

  return RIAA deemphasis value at frequency { f}

7.2.1 Typedef Documentation

7.2.1.1 typedef double Ah::Dbl

declaration of a scalar number

{ Dbl} is a scalar number, which is almost everwhere used in the {*Etech}* library. The reason for using this definition is to make it easier using floating point types other than { double} simply by changing this definition.

7.2.1.2 typedef std::complex<double> Ah::double_complex

7.2.2 Function Documentation

7.2.2.1 Cplx Ah::CdDeEmphasis (Dbl *f*)

return CD deemphasis value at frequency { f}

7.2.2.2 Cplx Ah::CdPreEmphasis (Dbl *f*)

return CD preemphasis value at frequency { f}

7.2.2.3 Dbl Ah::inDeg (Dbl *x*) [inline]

return phase argument in degree

7.2.2.4 Dbl Ah::inPdB (Dbl *x*) [inline]

return value in power decibel

7.2.2.5 Dbl Ah::inVdB (Dbl *x*) [inline]

return value in voltage decibel

7.2.2.6 Power Ah::operator * (const Current & *i*, const Voltage & *u*) [inline]

overloaded operator * for multiplication of { Current} * { Voltage}

7.2.2.7 Power Ah::operator * (const Voltage & *u*, const Current & *i*) [inline]

overloaded operator * for multiplication of { Voltage} * { Current}

7.2.2.8 Current Ah::operator ∗ (const Power & *p*, const Voltage & *u*) [inline]

overloaded operator / for division of { Power} / { Voltage}

7.2.2.9 Voltage Ah::operator ∗ (const Current & *i*, const Impedance & *r*) [inline]

overloaded operator ∗ for multiplication of { Current} ∗ { Impedance}

7.2.2.10 Voltage Ah::operator ∗ (const Impedance & *r*, const Current & *i*) [inline]

overloaded operator ∗ for multiplication of { Impedance} ∗ { Current}

7.2.2.11 Current Ah::operator/ (const Voltage & *u*, const Impedance & *r*) [inline]

overloaded operator / for division of { Voltage} / { Impedance}

7.2.2.12 Voltage Ah::operator/ (const Power & *p*, const Current & *i*) [inline]

overloaded operator / for division of { Power} / { Current}

7.2.2.13 Impedance Ah::operator/ (const Voltage & *u*, const Current & *i*) [inline]

overloaded operator / for division of { Voltage} / { Current}

7.2.2.14 Cplx Ah::RiaaDeEmphasis (Dbl *f*)

return RIAA deemphasis value at frequency { f}

7.2.2.15 Cplx Ah::RiaaPreEmphasis (Dbl *f*)

return RIAA preemphasis value at frequency { f}

Chapter 8

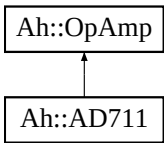
libAHetech Class Documentation

8.1 Ah::AD711 Class Reference

represents the operational amplifier AD711

`#include <AnalogDevOpAmps.h>`

Inheritance diagram for Ah::AD711::



Public Member Functions

- AD711 ()
  default constructor

8.1.1 Detailed Description

represents the operational amplifier AD711

{ AD711} represents the operational amplifier AD711 which can be used both in DC (direct current) and in AC (alternate current) applications.

8.1.2 Constructor & Destructor Documentation

8.1.2.1 Ah::AD711::AD711 ()

default constructor

The documentation for this class was generated from the following file:

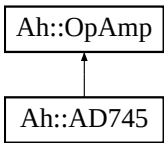
- AH/Etech/AnalogDevOpAmps.h

8.2 Ah::AD745 Class Reference

represents the ultra low noise operational amplifier AD745

`#include <AnalogDevOpAmps.h>`

Inheritance diagram for Ah::AD745::



Public Member Functions

- AD745 ()
  default constructor

8.2.1 Detailed Description

represents the ultra low noise operational amplifier AD745

{ AD745} represents the ultra low noise operational amplifier AD745 which can be used both in DC (direct current) and in AC (alternate current) applications.

8.2.2 Constructor & Destructor Documentation

8.2.2.1 Ah::AD745::AD745 ()

default constructor

The documentation for this class was generated from the following file:

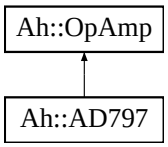
- AH/Etech/AnalogDevOpAmps.h

8.3 Ah::AD797 Class Reference

represents the ultra low noise operational amplifier AD797

`#include <AnalogDevOpAmps.h>`

Inheritance diagram for Ah::AD797::



Public Member Functions

- AD797 ()

  default constructor

8.3.1 Detailed Description

represents the ultra low noise operational amplifier AD797

{ AD797} represents the ultra low noise operational amplifier AD797 which can be used both in DC (direct current) and in AC (alternate current) applications.

8.3.2 Constructor & Destructor Documentation

8.3.2.1 Ah::AD797::AD797 ()

default constructor

The documentation for this class was generated from the following file:

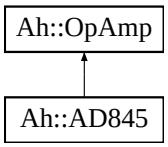
- AH/Etech/AnalogDevOpAmps.h

8.4 Ah::AD845 Class Reference

represents the fast precision operational amplifier AD845

`#include <AnalogDevOpAmps.h>`

Inheritance diagram for Ah::AD845::



Public Member Functions

- AD845 ()
  default constructor

8.4.1 Detailed Description

represents the fast precision operational amplifier AD845

{ AD845} represents the fast precision operational amplifier AD845 which can be used both in DC (direct current) and in AC (alternate current) applications.

8.4.2 Constructor & Destructor Documentation

8.4.2.1 Ah::AD845::AD845 ()

default constructor

The documentation for this class was generated from the following file:

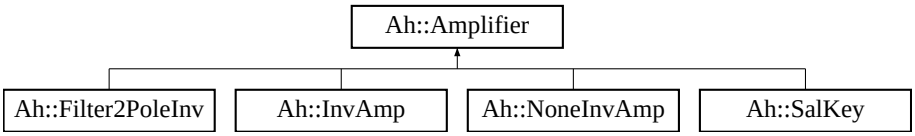
- AH/Etech/AnalogDevOpAmps.h

8.5 Ah::Amplifier Class Reference

pure virtual generic amplifier base class

`#include <Amplifier.h>`

Inheritance diagram for Ah::Amplifier::



Public Member Functions

- virtual ~Amplifier ()
  destructor:
- virtual Cplx getA (Dbl freq)=0
  get amplification at frequency { freq}
- virtual Cplx getA (Dbl freq, const Impedance &load)=0
  get amplification at frequency { freq} with { load}

8.5.1 Detailed Description

pure virtual generic amplifier base class

{ Amplifier} is a pure virtual amplifier base class which uses an operational amplifer. It can be used both in DC (direct current) and in AC (alternate current) applications.

8.5.2 Constructor & Destructor Documentation

8.5.2.1 virtual Ah::Amplifier::~Amplifier () `[inline, virtual]`

destructor:

8.5.3 Member Function Documentation

8.5.3.1 virtual Cplx Ah::Amplifier::getA (Dbl *freq*, const Impedance & *load*) `[pure virtual]`

get amplification at frequency { freq} with { load}

Implemented in Ah::Filter2PoleInv, Ah::InvAmp, Ah::NoneInvAmp, and Ah::SalKey.

8.5.3.2 virtual Cplx Ah::Amplifier::getA (Dbl *freq*) `[pure virtual]`

get amplification at frequency { freq}

Implemented in Ah::Filter2PoleInv, Ah::InvAmp, Ah::NoneInvAmp, and Ah::SalKey.

The documentation for this class was generated from the following file:

- AH/Etech/Amplifier.h

8.6 Ah::AnalogDevOpAmpCreator Class Reference

represents the creator class for Analog Devices operational amplifiers

`#include <AnalogDevOpCreat.h>`

Public Member Functions

- OpAmp * create (const char *model) const

  create instance of specified Analog Devices OpAmp

8.6.1 Detailed Description

represents the creator class for Analog Devices operational amplifiers

{ AnalogDevOpAmpCreator} represents a creator class for all operational amplifiers made by Analog Devices within {*libEtech}*.

8.6.2 Member Function Documentation

8.6.2.1 OpAmp* Ah::AnalogDevOpAmpCreator::create (const char * *model*) const

create instance of specified Analog Devices OpAmp

The documentation for this class was generated from the following file:

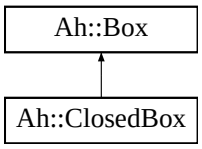
- AH/Etech/AnalogDevOpCreat.h

8.7 Ah::Box Class Reference

represents a loudspeaker box

`#include <Box.h>`

Inheritance diagram for Ah::Box::



Public Member Functions

- Box (Speaker &s, const char *n="")
  constructor
- virtual ~Box ()
  virtual destructor
- const char * getName () const
  get name of box
- const Speaker & getSpeaker () const
  get used speaker

Protected Attributes

- Speaker & sp

8.7.1 Detailed Description

represents a loudspeaker box

{ Box} represents a loudspeaker box.

8.7.2 Constructor & Destructor Documentation

8.7.2.1 Ah::Box::Box (Speaker & *s*, const char * *n* = "") [inline]

constructor

8.7.2.2 virtual Ah::Box::~Box () [inline, virtual]

virtual destructor

8.7.3 Member Function Documentation

8.7.3.1 const char* Ah::Box::getName () const [inline]

get name of box

8.7.3.2 const Speaker& Ah::Box::getSpeaker () const [inline]

get used speaker

8.7.4 Member Data Documentation

8.7.4.1 Speaker& Ah::Box::sp [protected]

The documentation for this class was generated from the following file:

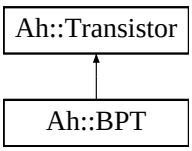
- AH/Etech/Box.h

8.8 Ah::BPT Class Reference

represents a bipolar transistor

`#include <BPT.h>`

Inheritance diagram for Ah::BPT::



Public Member Functions

- BPT ()
  default constructor
- virtual ~BPT ()
  destructor
- virtual Cplx getS (const Voltage &Ube, Dbl t=PhysConst_T25) const
  get steilheit
- virtual Cplx getS (const Current &Ic, Dbl t=PhysConst_T25) const
  get steilheit
- virtual Current getIout (const Voltage &Uin, Dbl t=PhysConst_T25) const
  return output current depending on input voltage

Static Public Member Functions

- static Voltage getUt (Dbl t=PhysConst_T25)
  get Ut at specified temperature

Static Protected Attributes

- static const Current Ics

8.8.1 Detailed Description

represents a bipolar transistor

{ BPT} represents a bipolar transistor. It can be used both in DC (direct current) and in AC (alternate current) applications.

8.8.2 Constructor & Destructor Documentation

8.8.2.1 Ah::BPT::BPT () [inline]

default constructor

8.8.2.2 virtual Ah::BPT::~BPT () [inline, virtual]

destructor

8.8.3 Member Function Documentation

8.8.3.1 virtual Current Ah::BPT::getIout (const Voltage & *Uin*, Dbl *t* = PhysConst_T25) const [virtual]

return output current depending on input voltage

Implements Ah::Transistor.

8.8.3.2 virtual Cplx Ah::BPT::getS (const Current & *Ic*, Dbl *t* = PhysConst_T25) const [virtual]

get steilheit

Implements Ah::Transistor.

8.8.3.3 virtual Cplx Ah::BPT::getS (const Voltage & *Ube*, Dbl *t* = PhysConst_T25) const [virtual]

get steilheit

Implements Ah::Transistor.

8.8.3.4 static Voltage Ah::BPT::getUt (Dbl *t* = PhysConst_T25) [static]

get Ut at specified temperature

8.8.4 Member Data Documentation

8.8.4.1 const Current Ah::BPT::Ics [static, protected]

The documentation for this class was generated from the following file:

- AH/Etech/BPT.h

8.9 Ah::BurrBrownOpAmpCreator Class Reference

represents the creator class for Burr-Brown operational amplifiers

`#include <BurrBrownOpCreat.h>`

Public Member Functions

- OpAmp * create (const char *model) const

  create instance of specified Burr-Brown OpAmp

8.9.1 Detailed Description

represents the creator class for Burr-Brown operational amplifiers

{ BurrBrownDevOpAmpCreator} represents a creator class for all operational amplifiers made by Burr-Brown within {*libEtech}*.

8.9.2 Member Function Documentation

8.9.2.1 OpAmp* Ah::BurrBrownOpAmpCreator::create (const char * *model*) const

create instance of specified Burr-Brown OpAmp

The documentation for this class was generated from the following file:

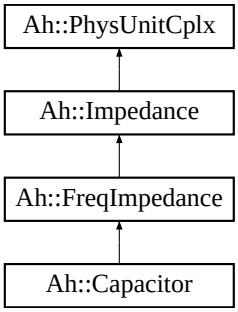
- AH/Etech/BurrBrownOpCreat.h

8.10 Ah::Capacitor Class Reference

represents an ideal electrical capacitor

`#include <Capacitor.h>`

Inheritance diagram for Ah::Capacitor::



Public Member Functions

- Capacitor (Dbl c=0.0)
  constructor
- Capacitor (const Capacitor &c)
  copy constructor
- Dbl getCap () const
  return capacity

Protected Member Functions

- virtual void calcVal (Dbl f)

Friends

- Capacitor operator+ (const Capacitor &c1, const Capacitor &c2)
  overloaded operator + for serial circuit of two capacitors
- Capacitor operator|| (const Capacitor &c1, const Capacitor &c2)
  overloaded operator || for parallel circuit of two capacitors
- Capacitor operator * (const Capacitor &c, Dbl k)
  *overloaded operator * for multiplication of { Capacitor} * { Dbl}*
- Capacitor operator * (Dbl k, const Capacitor &c)
  *overloaded operator * for multiplication of{ Dbl} * { Capacitor}*
- Capacitor operator/ (const Capacitor &c, Dbl k)

overloaded operator / for division of { Capacitor} / { Dbl}

- std::ostream & operator<< (std::ostream &out, const Capacitor &c)

  overloaded operator for output into streams

8.10.1 Detailed Description

represents an ideal electrical capacitor

{ Capacitor} represents an ideal electrical capacitor which can be used both in DC (direct current) and in AC (alternate current) applications.

8.10.2 Constructor & Destructor Documentation

8.10.2.1 Ah::Capacitor::Capacitor (Dbl *c* = 0.0) [inline]

constructor

8.10.2.2 Ah::Capacitor::Capacitor (const Capacitor & *c*) [inline]

copy constructor

8.10.3 Member Function Documentation

8.10.3.1 virtual void Ah::Capacitor::calcVal (Dbl *f*) [protected, virtual]

Implements Ah::FreqImpedance.

8.10.3.2 Dbl Ah::Capacitor::getCap () const [inline]

return capacity

8.10.4 Friends And Related Function Documentation

8.10.4.1 Capacitor operator * (Dbl *k*, const Capacitor & *c*) [friend]

overloaded operator * for multiplication of{ Dbl} * { Capacitor}

8.10.4.2 Capacitor operator * (const Capacitor & *c*, Dbl *k*) [friend]

overloaded operator * for multiplication of { Capacitor} * { Dbl}

8.10.4.3 Capacitor operator+ (const Capacitor & *c1*, const Capacitor & *c2*) [friend]

overloaded operator + for serial circuit of two capacitors

8.10.4.4 Capacitor operator/ (const Capacitor & *c*, Dbl *k*) [friend]

overloaded operator / for division of { Capacitor} / { Dbl}

8.10.4.5 std::ostream& operator<< (std::ostream & *out*, const Capacitor & *c*) [friend]

overloaded operator for output into streams

8.10.4.6 Capacitor operator|| (const Capacitor & *c1*, const Capacitor & *c2*) [friend]

overloaded operator || for parallel circuit of two capacitors

The documentation for this class was generated from the following file:

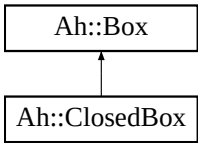
- AH/Etech/Capacitor.h

8.11 Ah::ClosedBox Class Reference

represents a closed loudseaker box

`#include <ClosedBox.h>`

Inheritance diagram for Ah::ClosedBox::



Public Member Functions

- ClosedBox (Speaker &s, Dbl q=0.7, bool d=true, const char *n="")
  constructor
- virtual ~ClosedBox ()
  virtual destructor
- Dbl getQt () const
  return damping factor of box-speaker system
- void calc (Dbl &Vb, Dbl &Fr, Dbl &F3) const
  calculate parameters: box volume, resonance frequency, lower limit

Protected Attributes

- Dbl Qt
- bool damped

8.11.1 Detailed Description

represents a closed loudseaker box

{ ClosedBox} represents a closed loudspeaker box.

8.11.2 Constructor & Destructor Documentation

8.11.2.1 Ah::ClosedBox::ClosedBox (Speaker & *s*, Dbl *q* = `0.7`, bool *d* = `true`, const char * *n* = "")

constructor

8.11.2.2 virtual Ah::ClosedBox::~ClosedBox () `[inline, virtual]`

virtual destructor

8.11.3 Member Function Documentation

8.11.3.1 void Ah::ClosedBox::calc (Dbl & *Vb*, Dbl & *Fr*, Dbl & *F3*) const

calculate parameters: box volume, resonance frequency, lower limit

8.11.3.2 Dbl Ah::ClosedBox::getQt () const [inline]

return damping factor of box-speaker system

8.11.4 Member Data Documentation

8.11.4.1 bool Ah::ClosedBox::damped [protected]

8.11.4.2 Dbl Ah::ClosedBox::Qt [protected]

The documentation for this class was generated from the following file:

- AH/Etech/ClosedBox.h

8.12 Ah::Cplx Class Reference

declaration of a complex number

`#include <aaa.h>`

8.12.1 Detailed Description

declaration of a complex number

{ Cplx} is a complex number, which is almost everwhere used in the {*Etech}* library. The reason for using this definition is to make it easier using complex types other than { double} simply by changing this definition.

The documentation for this class was generated from the following file:

- AH/Etech/aaa.h

8.13 Ah::Cplx Class Reference

declaration of a complex number

`#include <aaa.h>`

8.13.1 Detailed Description

declaration of a complex number

{ Cplx} is a complex number, which is almost everwhere used in the {*Etech}* library. The reason for using this definition is to make it easier using complex types other than { double} simply by changing this definition.

The documentation for this class was generated from the following file:

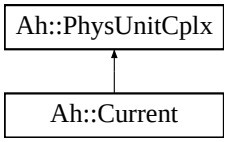
- AH/Etech/aaa.h

8.14 Ah::Current Class Reference

represents an electrical current

`#include <Current.h>`

Inheritance diagram for Ah::Current::



Public Member Functions

- Current (Dbl r=0.0, Dbl i=0.0)
  constructor
- Current (const Cplx &val)
  constructor
- Current (const Current &i)
  copy constructor

Friends

- Current operator+ (const Current &i1, const Current &i2)
  overloaded operator + for addition of two currents
- Current operator- (const Current &i1, const Current &i2)
  overloaded operator - for subtraction of two currents
- Current operator * (const Current &i1, const Cplx &k)
  *overloaded operator * for multiplication of { Current} * { Cplx}*
- Current operator * (const Cplx &k, const Current &i1)
  *overloaded operator * for multiplication of { Cplx} * { Current}*
- Current operator/ (const Current &i1, const Cplx &k)
  overloaded operator / for division of { Current} / { Cplx}
- bool operator== (const Current &i1, const Current &i2)
  overloaded operator == for comparison of two Currents
- bool operator!= (const Current &i1, const Current &i2)
  overloaded operator != for comparison of two Currents
- bool operator< (const Current &i1, const Current &i2)

overloaded operator < for comparison of two Currents

- bool operator> (const Current &i1, const Current &i2)
  overloaded operator > for comparison of two Currents

8.14.1 Detailed Description

represents an electrical current

{ Current} represents an electrical current which can be used both in DC (direct current) and in AC (alternate current) applications.

8.14.2 Constructor & Destructor Documentation

8.14.2.1 Ah::Current::Current (Dbl *r* = 0.0, Dbl *i* = 0.0) [inline]

constructor

8.14.2.2 Ah::Current::Current (const Cplx & *val*) [inline]

constructor

8.14.2.3 Ah::Current::Current (const Current & *i*) [inline]

copy constructor

8.14.3 Friends And Related Function Documentation

8.14.3.1 Current operator * (const Cplx & *k*, const Current & *i1*) [friend]

overloaded operator * for multiplication of { Cplx} * { Current}

8.14.3.2 Current operator * (const Current & *i1*, const Cplx & *k*) [friend]

overloaded operator * for multiplication of { Current} * { Cplx}

8.14.3.3 bool operator!= (const Current & *i1*, const Current & *i2*) [friend]

overloaded operator != for comparison of two Currents

8.14.3.4 Current operator+ (const Current & *i1*, const Current & *i2*) [friend]

overloaded operator + for addition of two currents

8.14.3.5 Current operator- (const Current & *i1*, const Current & *i2*) [friend]

overloaded operator - for subtraction of two currents

8.14.3.6 Current operator/ (const Current & *i1*, const Cplx & *k*) [friend]

overloaded operator / for division of { Current} / { Cplx}

8.14.3.7 bool operator< (const Current & *i1*, const Current & *i2*) [friend]

overloaded operator < for comparison of two Currents

8.14.3.8 bool operator== (const Current & *i1*, const Current & *i2*) [friend]

overloaded operator == for comparison of two Currents

8.14.3.9 bool operator> (const Current & *i1*, const Current & *i2*) [friend]

overloaded operator > for comparison of two Currents

The documentation for this class was generated from the following file:

- AH/Etech/Current.h

8.15 Ah::Divider Class Reference

represents a voltage divider

`#include <Divider.h>`

Public Member Functions

- Divider (const Impedance &z1, const Impedance &z2)
  constructor
- Divider (const Divider &d)
  copy constructor
- Cplx getAtt ()
  get attenuation
- Impedance getZin ()
  get input impedance

8.15.1 Detailed Description

represents a voltage divider

{ Divider} represents a voltage divider existing of two impedances.

8.15.2 Constructor & Destructor Documentation

8.15.2.1 Ah::Divider::Divider (const Impedance & *z1*, const Impedance & *z2*) [inline]

constructor

8.15.2.2 Ah::Divider::Divider (const Divider & *d*) [inline]

copy constructor

8.15.3 Member Function Documentation

8.15.3.1 Cplx Ah::Divider::getAtt () [inline]

get attenuation

8.15.3.2 Impedance Ah::Divider::getZin () [inline]

get input impedance

The documentation for this class was generated from the following file:

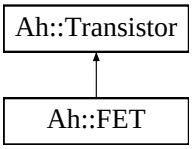
- AH/Etech/Divider.h

8.16 Ah::FET Class Reference

represents a FET

`#include <FET.h>`

Inheritance diagram for Ah::FET::



Public Member Functions

- FET (const Current &i_ds)
  default constructor
- FET (const FET &t)
  copy constructor
- virtual ~FET ()
  destructor:
- virtual Cplx getS (const Voltage &Ugs, Dbl t=PhysConst_T25) const
  get steilheit
- virtual Cplx getS (const Current &Id, Dbl t=PhysConst_T25) const
  get steilheit
- virtual Current getIout (const Voltage &Uin, Dbl t=PhysConst_T25) const
  return output current depending on input voltage

Static Public Member Functions

- static Voltage getUp (Dbl t=PhysConst_T25)
  get Up at specified temperature

Protected Attributes

- Current Ids

Static Protected Attributes

- static const Voltage Up25

8.16.1 Detailed Description

represents a FET

{ FET} represents a field effect transistor. It can be used both in DC (direct current) and in AC (alternate current) applications.

8.16.2 Constructor & Destructor Documentation

8.16.2.1 Ah::FET::FET (const Current & *i_ds*) [inline]

default constructor

8.16.2.2 Ah::FET::FET (const FET & *t*) [inline]

copy constructor

8.16.2.3 virtual Ah::FET::~FET () [inline, virtual]

destructor:

8.16.3 Member Function Documentation

8.16.3.1 virtual Current Ah::FET::getIout (const Voltage & *Uin*, Dbl *t* = PhysConst_T25) const [virtual]

return output current depending on input voltage

Implements Ah::Transistor.

8.16.3.2 virtual Cplx Ah::FET::getS (const Current & *Id*, Dbl *t* = PhysConst_T25) const [virtual]

get steilheit

Implements Ah::Transistor.

8.16.3.3 virtual Cplx Ah::FET::getS (const Voltage & *Ugs*, Dbl *t* = PhysConst_T25) const [virtual]

get steilheit

Implements Ah::Transistor.

8.16.3.4 static Voltage Ah::FET::getUp (Dbl *t* = PhysConst_T25) [static]

get Up at specified temperature

8.16.4 Member Data Documentation

8.16.4.1 Current Ah::FET::Ids [protected]

8.16.4.2 const Voltage Ah::FET::Up25 [static, protected]

The documentation for this class was generated from the following file:

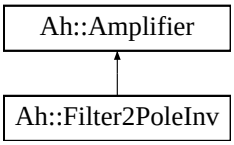
- AH/Etech/FET.h

8.17 Ah::Filter2PoleInv Class Reference

2-pole filter using multiple feedback on inverting amplifier

`#include <Filter2PoleInv.h>`

Inheritance diagram for Ah::Filter2PoleInv::



Public Member Functions

- Filter2PoleInv (const OpAmp &opamp, const Impedance &z1, const Impedance &z2, const Impedance &z3, const Impedance &z4, const Impedance &z5)

  constructors:

- virtual ~Filter2PoleInv ()

  destructor:

- virtual Cplx getA (Dbl freq)

  get amplification at frequency { freq}:

- virtual Cplx getA (Dbl freq, const Impedance &)

  get amplification at frequency { freq} with output { load}:

Static Public Member Functions

- static bool calcLowpass (Dbl fg, Dbl A0, Dbl a1, Dbl b1, const Capacitor &C1, const Capacitor &C2, Resistor &R1, Resistor &R2, Resistor &R3)

  calculate components

8.17.1 Detailed Description

2-pole filter using multiple feedback on inverting amplifier

{ Filter2PoleInv} is a 2 pole filter realized with an inverting (operational) amplifier having multiple feedback paths. {verbatim} _____ | | | Z2 Z5 | | | |-\ | In: –Z1–∗–Z24-∗–|- \ | | | —— Out Z3 –|+ / | | |_/ Gnd Gnd {verbatim} Typical applications are as follows: {description} [Lowpass:] Z1, Z2 and Z4 are resistors, Z3 and Z5 are capacitors, e.g:\ Z1=R1, Z2=R2, Z3=C2, Z4=R3, Z5=C1\ $R_1=-R_2/A_0$ [Highpass:] Z3 and Z5 are resistors, Z1, Z2 and Z4 are capacitors. [Bandpass:] Z1, Z3 and Z5 are resistors, Z2 and Z4 are capacitors. {description}

8.17.2 Constructor & Destructor Documentation

8.17.2.1 Ah::Filter2PoleInv::Filter2PoleInv (const OpAmp & *opamp*, const Impedance & *z1*, const Impedance & *z2*, const Impedance & *z3*, const Impedance & *z4*, const Impedance & *z5*)

constructors:

8.17.2.2 virtual Ah::Filter2PoleInv::~Filter2PoleInv () [inline, virtual]

destructor:

8.17.3 Member Function Documentation

8.17.3.1 static bool Ah::Filter2PoleInv::calcLowpass (Dbl *fg*, Dbl *A0*, Dbl *a1*, Dbl *b1*, const Capacitor & *C1*, const Capacitor & *C2*, Resistor & *R1*, Resistor & *R2*, Resistor & *R3*) [static]

calculate components

8.17.3.2 virtual Cplx Ah::Filter2PoleInv::getA (Dbl *freq*, const Impedance &) [inline, virtual]

get amplification at frequency { freq} with output { load}:

Implements Ah::Amplifier.

8.17.3.3 virtual Cplx Ah::Filter2PoleInv::getA (Dbl *freq*) [virtual]

get amplification at frequency { freq}:

Implements Ah::Amplifier.

The documentation for this class was generated from the following file:

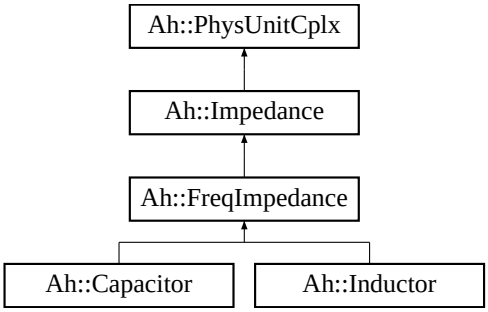
- AH/Etech/Filter2PoleInv.h

8.18 Ah::FreqImpedance Class Reference

represents an frequency dependent electrical impedance base class

`#include <FreqImp.h>`

Inheritance diagram for Ah::FreqImpedance::



Public Member Functions

- FreqImpedance (Dbl r=0.0, Dbl i=0.0)

  constructor

- FreqImpedance (const Cplx &val)

  constructor

- FreqImpedance (const FreqImpedance &f)

  copy constructor

- virtual ~FreqImpedance ()

  destructor

- virtual const Impedance & operator() (Dbl f)

  overloaded operator () for returning the impedance at frequency { f}

Protected Member Functions

- virtual void calcVal (Dbl f)=0

8.18.1 Detailed Description

represents an frequency dependent electrical impedance base class

{ FreqImpedance} represents an electrical impedance which is depending on the freqency. It is a pure virtual base class serving the implementation of capacitors and coils.

8.18.2 Constructor & Destructor Documentation

8.18.2.1 Ah::FreqImpedance::FreqImpedance (Dbl *r* = 0.0, Dbl *i* = 0.0) [inline]

constructor

8.18.2.2 Ah::FreqImpedance::FreqImpedance (const Cplx & *val*) [inline]

constructor

8.18.2.3 Ah::FreqImpedance::FreqImpedance (const FreqImpedance & *f*) [inline]

copy constructor

8.18.2.4 virtual Ah::FreqImpedance::~FreqImpedance () [inline, virtual]

destructor

8.18.3 Member Function Documentation

8.18.3.1 virtual void Ah::FreqImpedance::calcVal (Dbl *f*) [protected, pure virtual]

Implemented in Ah::Capacitor, and Ah::Inductor.

8.18.3.2 virtual const Impedance& Ah::FreqImpedance::operator() (Dbl *f*) [inline, virtual]

overloaded operator () for returning the impedance at frequency { f}

The documentation for this class was generated from the following file:

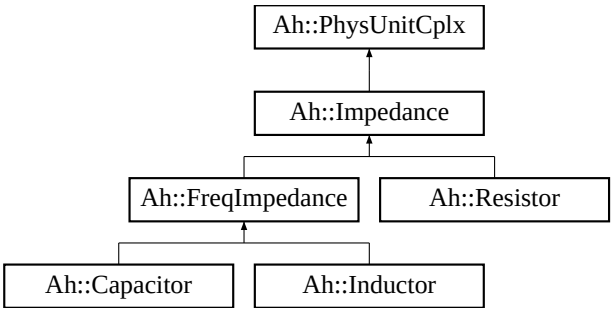
- AH/Etech/FreqImp.h

8.19 Ah::Impedance Class Reference

represents an electrical impedance

`#include <Impedance.h>`

Inheritance diagram for Ah::Impedance::



Public Member Functions

- Impedance (Dbl r=0.0, Dbl i=0.0)
  constructor
- Impedance (const Cplx &val)
  constructor
- Impedance (const Impedance &i)
  copy constructor

Friends

- Impedance operator+ (const Impedance &z1, const Impedance &z2)
  overloaded operator + for serial circuit of two impedances
- Impedance operator|| (const Impedance &z1, const Impedance &z2)
  overloaded operator || for parallel circuit of two impedances
- Impedance operator- (const Impedance &z1, const Impedance &z2)
  overloaded operator - for subtraction of two impedances
- Impedance operator * (const Impedance &z, Dbl k)
  *overloaded operator * for multiplication of { Impedance} * { Dbl}*
- Impedance operator * (Dbl k, const Impedance &z)
  *overloaded operator * for multiplication of{ Dbl} * { Impedance}*
- Impedance operator * (const Impedance &z, const Cplx &k)
  *overloaded operator * for multiplication of { Impedance} * { Cplx}*

- Impedance operator ∗ (const Cplx &k, const Impedance &z)

  overloaded operator ∗ for multiplication of{ Cplx} ∗ { Impedance}

- Impedance operator/ (const Impedance &z1, const Cplx &k)

  overloaded operator / for division of { Impedance} / { Cplx}

- bool operator== (const Impedance &z1, const Impedance &z2)

  overloaded operator == for comparison of two Impedances

- bool operator!= (const Impedance &z1, const Impedance &z2)

  overloaded operator != for comparison of two Impedances

- bool operator< (const Impedance &z1, const Impedance &z2)

  overloaded operator < for comparison of two Impedances

- bool operator> (const Impedance &z1, const Impedance &z2)

  overloaded operator > for comparison of two Impedances

8.19.1 Detailed Description

represents an electrical impedance

{ Impedance} represents an electrical impedance which can be used both in DC (direct current) and in AC (alternate current) applications.

8.19.2 Constructor & Destructor Documentation

8.19.2.1 Ah::Impedance::Impedance (Dbl *r* = `0.0`, Dbl *i* = `0.0`) `[inline]`

constructor

8.19.2.2 Ah::Impedance::Impedance (const Cplx & *val*) `[inline]`

constructor

8.19.2.3 Ah::Impedance::Impedance (const Impedance & *i*) `[inline]`

copy constructor

8.19.3 Friends And Related Function Documentation

8.19.3.1 Impedance operator ∗ (const Cplx & *k*, const Impedance & *z*) `[friend]`

overloaded operator ∗ for multiplication of{ Cplx} ∗ { Impedance}

8.19.3.2 Impedance operator * (const Impedance & z, const Cplx & k) [friend]

overloaded operator * for multiplication of { Impedance} * { Cplx}

8.19.3.3 Impedance operator * (Dbl k, const Impedance & z) [friend]

overloaded operator * for multiplication of{ Dbl} * { Impedance}

8.19.3.4 Impedance operator * (const Impedance & z, Dbl k) [friend]

overloaded operator * for multiplication of { Impedance} * { Dbl}

8.19.3.5 bool operator!= (const Impedance & z1, const Impedance & z2) [friend]

overloaded operator != for comparison of two Impedances

8.19.3.6 Impedance operator+ (const Impedance & z1, const Impedance & z2) [friend]

overloaded operator + for serial circuit of two impedances

8.19.3.7 Impedance operator- (const Impedance & z1, const Impedance & z2) [friend]

overloaded operator - for subtraction of two impedances

8.19.3.8 Impedance operator/ (const Impedance & z1, const Cplx & k) [friend]

overloaded operator / for division of { Impedance} / { Cplx}

8.19.3.9 bool operator< (const Impedance & z1, const Impedance & z2) [friend]

overloaded operator < for comparison of two Impedances

8.19.3.10 bool operator== (const Impedance & z1, const Impedance & z2) [friend]

overloaded operator == for comparison of two Impedances

8.19.3.11 bool operator> (const Impedance & z1, const Impedance & z2) [friend]

overloaded operator > for comparison of two Impedances

8.19.3.12 Impedance operator|| (const Impedance & z1, const Impedance & z2) [friend]

overloaded operator || for parallel circuit of two impedances

The documentation for this class was generated from the following file:

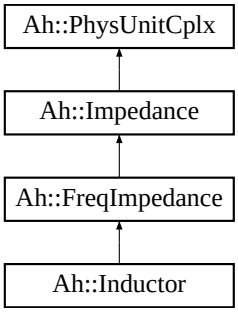
- AH/Etech/Impedance.h

8.20 Ah::Inductor Class Reference

represents an ideal electrical inductor

`#include <Inductor.h>`

Inheritance diagram for Ah::Inductor::



Public Member Functions

- Inductor (Dbl l=0.0)
  constructor
- Inductor (const Inductor &l)
  copy constructor
- Dbl getInd () const
  return inductivity

Protected Member Functions

- virtual void calcVal (Dbl f)

Friends

- Inductor operator+ (const Inductor &l1, const Inductor &l2)
  overloaded operator + for serial circuit of two inductors
- Inductor operator|| (const Inductor &l1, const Inductor &l2)
  overloaded operator || for parallel circuit of two inductors
- Inductor operator * (const Inductor &l, Dbl k)
  *overloaded operator * for multiplication of { Inductor} * { Dbl}*
- Inductor operator * (Dbl k, const Inductor &l)
  *overloaded operator * for multiplication of{ Dbl} * { Inductor}*
- Inductor operator/ (const Inductor &l, Dbl k)

overloaded operator / for division of { Inductor} / { Dbl}

- std::ostream & operator<< (std::ostream &out, const Inductor &i)

  overloaded operator for output into streams

8.20.1 Detailed Description

represents an ideal electrical inductor

{ Inductor} represents an ideal electrical inductor which can be used both in DC (direct current) and in AC (alternate current) applications.

8.20.2 Constructor & Destructor Documentation

8.20.2.1 Ah::Inductor::Inductor (Dbl *l* = `0.0`) `[inline]`

constructor

8.20.2.2 Ah::Inductor::Inductor (const Inductor & *l*) `[inline]`

copy constructor

8.20.3 Member Function Documentation

8.20.3.1 virtual void Ah::Inductor::calcVal (Dbl *f*) `[protected, virtual]`

Implements Ah::FreqImpedance.

8.20.3.2 Dbl Ah::Inductor::getInd () const `[inline]`

return inductivity

8.20.4 Friends And Related Function Documentation

8.20.4.1 Inductor operator * (Dbl *k*, const Inductor & *l*) `[friend]`

overloaded operator * for multiplication of{ Dbl} * { Inductor}

8.20.4.2 Inductor operator * (const Inductor & *l*, Dbl *k*) `[friend]`

overloaded operator * for multiplication of { Inductor} * { Dbl}

8.20.4.3 Inductor operator+ (const Inductor & *l1*, const Inductor & *l2*) `[friend]`

overloaded operator + for serial circuit of two inductors

8.20.4.4 Inductor operator/ (const Inductor & *l*, Dbl *k*) [friend]

overloaded operator / for division of { Inductor} / { Dbl}

8.20.4.5 std::ostream& operator<< (std::ostream & *out*, const Inductor & *i*) [friend]

overloaded operator for output into streams

8.20.4.6 Inductor operator|| (const Inductor & *l1*, const Inductor & *l2*) [friend]

overloaded operator || for parallel circuit of two inductors

The documentation for this class was generated from the following file:

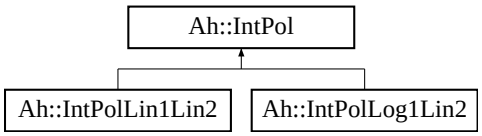
- AH/Etech/Inductor.h

8.21 Ah::IntPol Class Reference

represents a pure virtual interpolation class

`#include <IntPol.h>`

Inheritance diagram for Ah::IntPol::



Public Member Functions

- IntPol (IntPolData *data, unsigned int size)
  constructor
- virtual ~IntPol ()
  virtual destructor
- virtual Dbl getY (Dbl x) const
  return interpolated value

Protected Member Functions

- virtual Dbl interpolate (Dbl x, const IntPolData &p, const IntPolData &q) const =0

Protected Attributes

- std::vector< IntPolData > table

8.21.1 Detailed Description

represents a pure virtual interpolation class

{ IntPol} represents an pure interpolation class.

8.21.2 Constructor & Destructor Documentation

8.21.2.1 Ah::IntPol::IntPol (IntPolData * *data*, unsigned int *size*)

constructor

8.21.2.2 virtual Ah::IntPol::~IntPol () `[virtual]`

virtual destructor

8.21.3 Member Function Documentation

8.21.3.1 virtual Dbl Ah::IntPol::getY (Dbl *x*) const [virtual]

return interpolated value

8.21.3.2 virtual Dbl Ah::IntPol::interpolate (Dbl *x*, const IntPolData & *p*, const IntPolData & *q*) const [protected, pure virtual]

Implemented in Ah::IntPolLin1Lin2, and Ah::IntPolLog1Lin2.

8.21.4 Member Data Documentation

8.21.4.1 std::vector<IntPolData> Ah::IntPol::table [protected]

The documentation for this class was generated from the following file:

- AH/Etech/IntPol.h

8.22 Ah::IntPolData Struct Reference

`#include <IntPol.h>`

Public Attributes

- Dbl x
- Dbl y

8.22.1 Member Data Documentation

8.22.1.1 Dbl Ah::IntPolData::x

8.22.1.2 Dbl Ah::IntPolData::y

The documentation for this struct was generated from the following file:

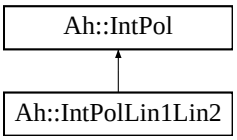
- AH/Etech/IntPol.h

8.23 Ah::IntPolLin1Lin2 Class Reference

represents a linear interpolation class

`#include <IntPol.h>`

Inheritance diagram for Ah::IntPolLin1Lin2::



Public Member Functions

- IntPolLin1Lin2 (IntPolData *data, unsigned int size)
  constructor

Protected Member Functions

- virtual Dbl interpolate (Dbl x, const IntPolData &p, const IntPolData &q) const

8.23.1 Detailed Description

represents a linear interpolation class

{ IntPolLin1Lin2} represents a linear interpolation class.

8.23.2 Constructor & Destructor Documentation

8.23.2.1 Ah::IntPolLin1Lin2::IntPolLin1Lin2 (IntPolData * *data*, unsigned int *size*) `[inline]`

constructor

8.23.3 Member Function Documentation

8.23.3.1 virtual Dbl Ah::IntPolLin1Lin2::interpolate (Dbl *x*, const IntPolData & *p*, const IntPolData & *q*) const `[protected, virtual]`

Implements Ah::IntPol.

The documentation for this class was generated from the following file:

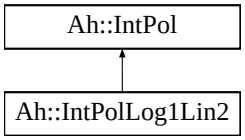
- AH/Etech/IntPol.h

8.24 Ah::IntPolLog1Lin2 Class Reference

represents a logarithmic interpolation class

`#include <IntPol.h>`

Inheritance diagram for Ah::IntPolLog1Lin2::



Public Member Functions

- IntPolLog1Lin2 (IntPolData *data, unsigned int size)
  constructor

Protected Member Functions

- virtual Dbl interpolate (Dbl x, const IntPolData &p, const IntPolData &q) const

8.24.1 Detailed Description

represents a logarithmic interpolation class

{ IntPolLog1Lin2} represents a single logarithmic interpolation class.

8.24.2 Constructor & Destructor Documentation

8.24.2.1 Ah::IntPolLog1Lin2::IntPolLog1Lin2 (IntPolData * *data*, unsigned int *size*) `[inline]`

constructor

8.24.3 Member Function Documentation

8.24.3.1 virtual Dbl Ah::IntPolLog1Lin2::interpolate (Dbl *x*, const IntPolData & *p*, const IntPolData & *q*) const `[protected, virtual]`

Implements Ah::IntPol.

The documentation for this class was generated from the following file:

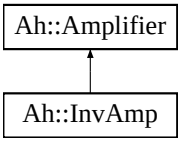
- AH/Etech/IntPol.h

8.25 Ah::InvAmp Class Reference

represents an inverting amplifier

`#include <InvAmp.h>`

Inheritance diagram for Ah::InvAmp::



Public Member Functions

- InvAmp (const Impedance &z1, const Impedance &z2)
  constructor
- InvAmp (const OpAmp &opamp, const Impedance &z1, const Impedance &z2)
  constructor
- virtual ~InvAmp ()
  destructor:
- virtual Cplx getA (Dbl freq)
  get amplification at frequency { freq}
- virtual Cplx getA (Dbl freq, const Impedance &load)
  get amplification at frequency { freq} with { load}

8.25.1 Detailed Description

represents an inverting amplifier

{ NoneInvAmp} is an inverting amplifier which uses an operational amplifer. It can be used both in DC (direct current) and in AC (alternate current) applications.

8.25.2 Constructor & Destructor Documentation

8.25.2.1 Ah::InvAmp::InvAmp (const Impedance & *z1*, const Impedance & *z2*) `[inline]`

constructor

8.25.2.2 Ah::InvAmp::InvAmp (const OpAmp & *opamp*, const Impedance & *z1*, const Impedance & *z2*) `[inline]`

constructor

8.25.2.3 virtual Ah::InvAmp::~InvAmp () [inline, virtual]

destructor:

8.25.3 Member Function Documentation

8.25.3.1 virtual Cplx Ah::InvAmp::getA (Dbl *freq*, const Impedance & *load*) [virtual]

get amplification at frequency { freq} with { load}

Implements Ah::Amplifier.

8.25.3.2 virtual Cplx Ah::InvAmp::getA (Dbl *freq*) [virtual]

get amplification at frequency { freq}

Implements Ah::Amplifier.

The documentation for this class was generated from the following file:

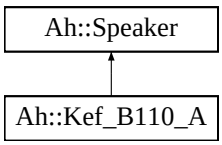
- AH/Etech/InvAmp.h

8.26 Ah::Kef_B110_A Class Reference

represents the speaker KEF B 110 SP 1003

`#include <KefSpeakers.h>`

Inheritance diagram for Ah::Kef_B110_A::



Public Member Functions

- Kef_B110_A ()
  default constructor
- virtual ~Kef_B110_A ()
  destructor

8.26.1 Detailed Description

represents the speaker KEF B 110 SP 1003

{ Kef} represents the small bass/midrange speaker B 110 SP 1003 (B110-A) which is made by KEF.

8.26.2 Constructor & Destructor Documentation

8.26.2.1 Ah::Kef_B110_A::Kef_B110_A ()

default constructor

8.26.2.2 virtual Ah::Kef_B110_A::~Kef_B110_A () `[inline, virtual]`

destructor

The documentation for this class was generated from the following file:

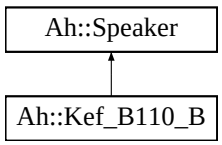
- AH/Etech/KefSpeakers.h

8.27 Ah::Kef_B110_B Class Reference

represents the speaker KEF B 110 SP 1057

`#include <KefSpeakers.h>`

Inheritance diagram for Ah::Kef_B110_B::



Public Member Functions

- Kef_B110_B ()
  default constructor
- virtual ~Kef_B110_B ()
  destructor

8.27.1 Detailed Description

represents the speaker KEF B 110 SP 1057

{ Kef} represents the small bass/midrange speaker B 110 SP 1057 (B110-B) which is made by KEF.

8.27.2 Constructor & Destructor Documentation

8.27.2.1 Ah::Kef_B110_B::Kef_B110_B ()

default constructor

8.27.2.2 virtual Ah::Kef_B110_B::~Kef_B110_B () `[inline, virtual]`

destructor

The documentation for this class was generated from the following file:

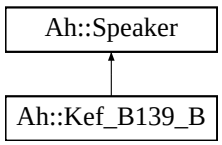
- AH/Etech/KefSpeakers.h

8.28 Ah::Kef_B139_B Class Reference

represents the speaker KEF B 139 SP 1044

`#include <KefSpeakers.h>`

Inheritance diagram for Ah::Kef_B139_B::



Public Member Functions

- Kef_B139_B ()
  default constructor
- virtual ~Kef_B139_B ()
  destructor

8.28.1 Detailed Description

represents the speaker KEF B 139 SP 1044

{ Kef} represents the flat oval bass speaker B 139 SP 1044 (B139-B) which is made by KEF.

8.28.2 Constructor & Destructor Documentation

8.28.2.1 Ah::Kef_B139_B::Kef_B139_B ()

default constructor

8.28.2.2 virtual Ah::Kef_B139_B::~Kef_B139_B () `[inline, virtual]`

destructor

The documentation for this class was generated from the following file:

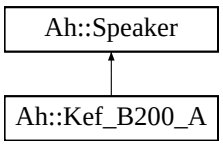
- AH/Etech/KefSpeakers.h

8.29 Ah::Kef_B200_A Class Reference

represents the speaker KEF B 200 SP 1014

`#include <KefSpeakers.h>`

Inheritance diagram for Ah::Kef_B200_A::



Public Member Functions

- Kef_B200_A ()
  default constructor
- virtual ~Kef_B200_A ()
  destructor

8.29.1 Detailed Description

represents the speaker KEF B 200 SP 1014

{ Kef} represents the bass/midrange speaker B 200 SP 1014 (B200-A) which is made by KEF.

8.29.2 Constructor & Destructor Documentation

8.29.2.1 Ah::Kef_B200_A::Kef_B200_A ()

default constructor

8.29.2.2 virtual Ah::Kef_B200_A::~Kef_B200_A () `[inline, virtual]`

destructor

The documentation for this class was generated from the following file:

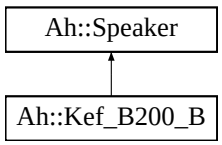
- AH/Etech/KefSpeakers.h

8.30 Ah::Kef_B200_B Class Reference

represents the speaker KEF B 200 SP 1039

`#include <KefSpeakers.h>`

Inheritance diagram for Ah::Kef_B200_B::



Public Member Functions

- Kef_B200_B ()
  default constructor
- virtual ~Kef_B200_B ()
  destructor

8.30.1 Detailed Description

represents the speaker KEF B 200 SP 1039

{ Kef} represents the bass/midrange speaker B 200 SP 1039 (B200-B) which is made by KEF.

8.30.2 Constructor & Destructor Documentation

8.30.2.1 Ah::Kef_B200_B::Kef_B200_B ()

default constructor

8.30.2.2 virtual Ah::Kef_B200_B::~Kef_B200_B () `[inline, virtual]`

destructor

The documentation for this class was generated from the following file:

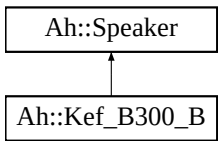
- AH/Etech/KefSpeakers.h

8.31 Ah::Kef_B300_B Class Reference

represents the speaker KEF B 300 SP 1071

`#include <KefSpeakers.h>`

Inheritance diagram for Ah::Kef_B300_B::



Public Member Functions

- Kef_B300_B ()
  default constructor
- virtual ~Kef_B300_B ()
  destructor

8.31.1 Detailed Description

represents the speaker KEF B 300 SP 1071

{ Kef} represents the flat oval bass speaker B 300 SP 1071 (B300-B) which is made by KEF.

8.31.2 Constructor & Destructor Documentation

8.31.2.1 Ah::Kef_B300_B::Kef_B300_B ()

default constructor

8.31.2.2 virtual Ah::Kef_B300_B::~Kef_B300_B () `[inline, virtual]`

destructor

The documentation for this class was generated from the following file:

- AH/Etech/KefSpeakers.h

8.32 Ah::LinTechOpAmpCreator Class Reference

represents the creator class for Linear Technology operational amplifiers

`#include <LinTechOpCreat.h>`

Public Member Functions

- OpAmp * create (const char *model) const

  create instance of specified Linear Technology OpAmp

8.32.1 Detailed Description

represents the creator class for Linear Technology operational amplifiers

{ BurrBrownDevOpAmpCreator} represents a creator class for all operational amplifiers made by Linear Technology within {*libEtech}*.

8.32.2 Member Function Documentation

8.32.2.1 OpAmp* Ah::LinTechOpAmpCreator::create (const char * *model*) const

create instance of specified Linear Technology OpAmp

The documentation for this class was generated from the following file:

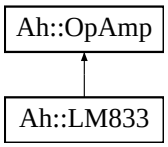
- AH/Etech/LinTechOpCreat.h

8.33 Ah::LM833 Class Reference

represents the audio operational amplifier LM833

`#include <MiscOpAmps.h>`

Inheritance diagram for Ah::LM833::



Public Member Functions

- LM833 ()

  default constructor

8.33.1 Detailed Description

represents the audio operational amplifier LM833

{ LM833} represents the audio operational amplifier LM833 which can be used both in DC (direct current) and in AC (alternate current) applications.

8.33.2 Constructor & Destructor Documentation

8.33.2.1 Ah::LM833::LM833 ()

default constructor

The documentation for this class was generated from the following file:

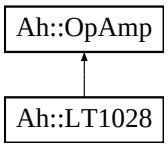
- AH/Etech/MiscOpAmps.h

8.34 Ah::LT1028 Class Reference

represents the very fast high precision operational amplifier LT1028

`#include <LinTechOpAmps.h>`

Inheritance diagram for Ah::LT1028::



Public Member Functions

- LT1028 ()
  default constructor

8.34.1 Detailed Description

represents the very fast high precision operational amplifier LT1028

{ LT1028} represents the very fast high precision operational amplifier LT1028 made by Linear Technology which can be used both in DC (direct current) and in AC (alternate current) applications.

8.34.2 Constructor & Destructor Documentation

8.34.2.1 Ah::LT1028::LT1028 ()

default constructor

The documentation for this class was generated from the following file:

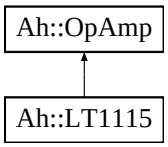
- AH/Etech/LinTechOpAmps.h

8.35 Ah::LT1115 Class Reference

represents the audio operational amplifier LT1115

`#include <LinTechOpAmps.h>`

Inheritance diagram for Ah::LT1115::



Public Member Functions

- LT1115 ()
  default constructor

8.35.1 Detailed Description

represents the audio operational amplifier LT1115

{ LT1115} represents the audio operational amplifier LT1115 made by Linear Technology which can be used both in DC (direct current) and in AC (alternate current) applications.

8.35.2 Constructor & Destructor Documentation

8.35.2.1 Ah::LT1115::LT1115 ()

default constructor

The documentation for this class was generated from the following file:

- AH/Etech/LinTechOpAmps.h

8.36 Ah::MathConst Class Reference

represents some mathical constants

`#include <MathConst.h>`

Static Public Attributes

- static const Dbl Pi = 3.14159265359
  Pi.

8.36.1 Detailed Description

represents some mathical constants

{ MathConst} is a class containing some mathematical constants.

8.36.2 Member Data Documentation

8.36.2.1 const Dbl Ah::MathConst::Pi = 3.14159265359 [static]

Pi.

The documentation for this class was generated from the following file:

- AH/Etech/MathConst.h

8.37 Ah::MiscOpAmpCreator Class Reference

represents the OpAmp creator class

`#include <MiscOpCreat.h>`

Public Member Functions

- OpAmp * create (const char *model) const

  create instance of specified OpAmp

8.37.1 Detailed Description

represents the OpAmp creator class

{ OpAmpCreator} represents a creator class for all miscellaneous operational amplifiers (no company specified) within {*libEtech}*.

8.37.2 Member Function Documentation

8.37.2.1 OpAmp* Ah::MiscOpAmpCreator::create (const char * *model*) const

create instance of specified OpAmp

The documentation for this class was generated from the following file:

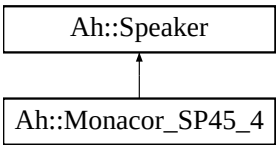
- AH/Etech/MiscOpCreat.h

8.38 Ah::Monacor_SP45_4 Class Reference

represents the speaker Monacor SP-45/4

`#include <MonacorSpeakers.h>`

Inheritance diagram for Ah::Monacor_SP45_4::



Public Member Functions

- Monacor_SP45_4 ()
  default constructor
- virtual ~Monacor_SP45_4 ()
  destructor

8.38.1 Detailed Description

represents the speaker Monacor SP-45/4

{ Monacor} represents the small bass/midrange speaker SP-45 in 4 Ohm version which is made by Monacor.

8.38.2 Constructor & Destructor Documentation

8.38.2.1 Ah::Monacor_SP45_4::Monacor_SP45_4 ()

default constructor

8.38.2.2 virtual Ah::Monacor_SP45_4::~Monacor_SP45_4 () `[inline, virtual]`

destructor

The documentation for this class was generated from the following file:

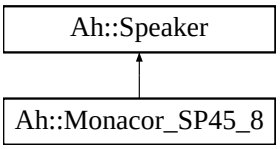
- AH/Etech/MonacorSpeakers.h

8.39 Ah::Monacor_SP45_8 Class Reference

represents the speaker Monacor SP-45/8

`#include <MonacorSpeakers.h>`

Inheritance diagram for Ah::Monacor_SP45_8::



Public Member Functions

- Monacor_SP45_8 ()
  default constructor
- virtual ~Monacor_SP45_8 ()
  destructor

8.39.1 Detailed Description

represents the speaker Monacor SP-45/8

{ Monacor} represents the small bass/midrange speaker SP-45 in 8 Ohm version which is made by Monacor.

8.39.2 Constructor & Destructor Documentation

8.39.2.1 Ah::Monacor_SP45_8::Monacor_SP45_8 ()

default constructor

8.39.2.2 virtual Ah::Monacor_SP45_8::~Monacor_SP45_8 () `[inline, virtual]`

destructor

The documentation for this class was generated from the following file:

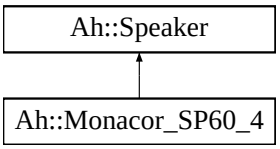
- AH/Etech/MonacorSpeakers.h

8.40 Ah::Monacor_SP60_4 Class Reference

represents the speaker Monacor SP-60/4

`#include <MonacorSpeakers.h>`

Inheritance diagram for Ah::Monacor_SP60_4::



Public Member Functions

- Monacor_SP60_4 ()
  default constructor
- virtual ~Monacor_SP60_4 ()
  destructor

8.40.1 Detailed Description

represents the speaker Monacor SP-60/4

{ Monacor} represents the small bass/midrange speaker SP-60 in 4 Ohm version which is made by Monacor.

8.40.2 Constructor & Destructor Documentation

8.40.2.1 Ah::Monacor_SP60_4::Monacor_SP60_4 ()

default constructor

8.40.2.2 virtual Ah::Monacor_SP60_4::~Monacor_SP60_4 () `[inline, virtual]`

destructor

The documentation for this class was generated from the following file:

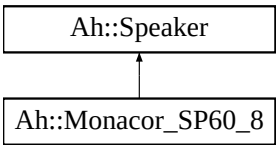
- AH/Etech/MonacorSpeakers.h

8.41 Ah::Monacor_SP60_8 Class Reference

represents the speaker Monacor SP-60/8

`#include <MonacorSpeakers.h>`

Inheritance diagram for Ah::Monacor_SP60_8::



Public Member Functions

- Monacor_SP60_8 ()
  default constructor
- virtual ~Monacor_SP60_8 ()
  destructor

8.41.1 Detailed Description

represents the speaker Monacor SP-60/8

{ Monacor} represents the small bass/midrange speaker SP-60 in 8 Ohm version which is made by Monacor.

8.41.2 Constructor & Destructor Documentation

8.41.2.1 Ah::Monacor_SP60_8::Monacor_SP60_8 ()

default constructor

8.41.2.2 virtual Ah::Monacor_SP60_8::~Monacor_SP60_8 () `[inline, virtual]`

destructor

The documentation for this class was generated from the following file:

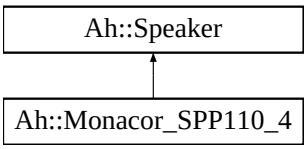
- AH/Etech/MonacorSpeakers.h

8.42 Ah::Monacor_SPP110_4 Class Reference

represents the speaker Monacor SPP-110/4

`#include <MonacorSpeakers.h>`

Inheritance diagram for Ah::Monacor_SPP110_4::



Public Member Functions

- Monacor_SPP110_4 ()
  default constructor
- virtual ~Monacor_SPP110_4 ()
  destructor

8.42.1 Detailed Description

represents the speaker Monacor SPP-110/4

{ Monacor} represents the small bass/midrange speaker SP-110 in 4 Ohm version which is made by Monacor.

8.42.2 Constructor & Destructor Documentation

8.42.2.1 Ah::Monacor_SPP110_4::Monacor_SPP110_4 ()

default constructor

8.42.2.2 virtual Ah::Monacor_SPP110_4::~Monacor_SPP110_4 () `[inline, virtual]`

destructor

The documentation for this class was generated from the following file:

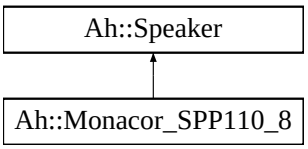
- AH/Etech/MonacorSpeakers.h

8.43 Ah::Monacor_SPP110_8 Class Reference

represents the speaker Monacor SPP-110/8

`#include <MonacorSpeakers.h>`

Inheritance diagram for Ah::Monacor_SPP110_8::



Public Member Functions

- Monacor_SPP110_8 ()
  default constructor
- virtual ~Monacor_SPP110_8 ()
  destructor
- virtual Dbl getSpl (Dbl freq) const
  get acoustic power level dB/W/m at specified frequency

8.43.1 Detailed Description

represents the speaker Monacor SPP-110/8

{ Monacor} represents the small bass/midrange speaker SP-110 in 8 Ohm version which is made by Monacor.

8.43.2 Constructor & Destructor Documentation

8.43.2.1 Ah::Monacor_SPP110_8::Monacor_SPP110_8 ()

default constructor

8.43.2.2 virtual Ah::Monacor_SPP110_8::~Monacor_SPP110_8 () `[inline, virtual]`

destructor

8.43.3 Member Function Documentation

8.43.3.1 virtual Dbl Ah::Monacor_SPP110_8::getSpl (Dbl *freq*) const `[virtual]`

get acoustic power level dB/W/m at specified frequency

Reimplemented from Ah::Speaker.

The documentation for this class was generated from the following file:

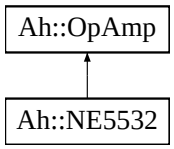
- AH/Etech/MonacorSpeakers.h

8.44 Ah::NE5532 Class Reference

represents the audio operational amplifier NE5532

`#include <MiscOpAmps.h>`

Inheritance diagram for Ah::NE5532::



Public Member Functions

- NE5532 ()
  default constructor

8.44.1 Detailed Description

represents the audio operational amplifier NE5532

{ NE5532} represents the audio operational amplifier NE5532 which can be used both in DC (direct current) and in AC (alternate current) applications.

8.44.2 Constructor & Destructor Documentation

8.44.2.1 Ah::NE5532::NE5532 ()

default constructor

The documentation for this class was generated from the following file:

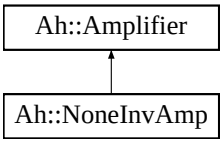
- AH/Etech/MiscOpAmps.h

8.45 Ah::NoneInvAmp Class Reference

represents a none inverting amplifier

`#include <NoneInvAmp.h>`

Inheritance diagram for Ah::NoneInvAmp::



Public Member Functions

- NoneInvAmp (const Impedance &z1, const Impedance &z2)

  constructor:

- NoneInvAmp (const OpAmp &opamp, const Impedance &z1, const Impedance &z2)

  constructor:

- NoneInvAmp (const OpAmp &opamp, const Impedance &z1, const Impedance &z2, const Impedance &zi)

  constructor:

- virtual ~NoneInvAmp ()

  destructor:

- virtual Cplx getA (Dbl freq)

  get amplification at frequency { freq}

- virtual Cplx getA (Dbl freq, const Impedance &load)

  get amplification at frequency { freq} with { load}

Protected Member Functions

- virtual const Cplx * getAd (Dbl freq)

  get open loop amplification at frequency { freq}

8.45.1 Detailed Description

represents a none inverting amplifier

{ NoneInvAmp} is a none inverting amplifier which uses an operational amplifer. It can be used both in DC (direct current) and in AC (alternate current) applications.

8.45.2 Constructor & Destructor Documentation

8.45.2.1 Ah::NoneInvAmp::NoneInvAmp (const Impedance & *z1*, const Impedance & *z2*) [inline]

constructor:

8.45.2.2 Ah::NoneInvAmp::NoneInvAmp (const OpAmp & *opamp*, const Impedance & *z1*, const Impedance & *z2*) [inline]

constructor:

8.45.2.3 Ah::NoneInvAmp::NoneInvAmp (const OpAmp & *opamp*, const Impedance & *z1*, const Impedance & *z2*, const Impedance & *zi*) [inline]

constructor:

8.45.2.4 virtual Ah::NoneInvAmp::~NoneInvAmp () [inline, virtual]

destructor:

8.45.3 Member Function Documentation

8.45.3.1 virtual Cplx Ah::NoneInvAmp::getA (Dbl *freq*, const Impedance & *load*) [virtual]

get amplification at frequency { freq} with { load}

Implements Ah::Amplifier.

8.45.3.2 virtual Cplx Ah::NoneInvAmp::getA (Dbl *freq*) [virtual]

get amplification at frequency { freq}

Implements Ah::Amplifier.

8.45.3.3 virtual const Cplx* Ah::NoneInvAmp::getAd (Dbl *freq*) [protected, virtual]

get open loop amplification at frequency { freq}

The documentation for this class was generated from the following file:

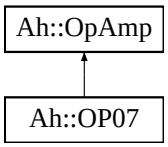
- AH/Etech/NoneInvAmp.h

8.46 Ah::OP07 Class Reference

represents the industry standard precision operational amplifier OP07

`#include <MiscOpAmps.h>`

Inheritance diagram for Ah::OP07::



Public Member Functions

- OP07 ()

  default constructor

8.46.1 Detailed Description

represents the industry standard precision operational amplifier OP07

{ OP07} represents the industry standard precision operational amplifier OP07 which can be used both in DC (direct current) and in AC (alternate current) applications.

8.46.2 Constructor & Destructor Documentation

8.46.2.1 Ah::OP07::OP07 ()

default constructor

The documentation for this class was generated from the following file:

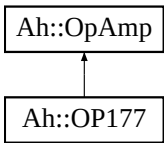
- AH/Etech/MiscOpAmps.h

8.47 Ah::OP177 Class Reference

represents the industry standard high precision operational amplifier OP177

`#include <MiscOpAmps.h>`

Inheritance diagram for Ah::OP177::



Public Member Functions

- OP177 ()

  default constructor

8.47.1 Detailed Description

represents the industry standard high precision operational amplifier OP177

{ OP177} represents the industry standard high precision operational amplifier OP177 which can be used both in DC (direct current) and in AC (alternate current) applications.

8.47.2 Constructor & Destructor Documentation

8.47.2.1 Ah::OP177::OP177 ()

default constructor

The documentation for this class was generated from the following file:

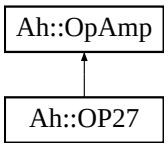
- AH/Etech/MiscOpAmps.h

8.48 Ah::OP27 Class Reference

represents the fast industry standard precision operational amplifier OP27

`#include <MiscOpAmps.h>`

Inheritance diagram for Ah::OP27::



Public Member Functions

- OP27 ()
  default constructor

8.48.1 Detailed Description

represents the fast industry standard precision operational amplifier OP27

{ OP27} represents the fast industry standard precision operational amplifier OP27 which can be used both in DC (direct current) and in AC (alternate current) applications.

8.48.2 Constructor & Destructor Documentation

8.48.2.1 Ah::OP27::OP27 ()

default constructor

The documentation for this class was generated from the following file:

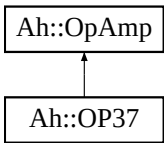
- AH/Etech/MiscOpAmps.h

8.49 Ah::OP37 Class Reference

represents the very fast industry standard precision operational amplifier OP37

`#include <MiscOpAmps.h>`

Inheritance diagram for Ah::OP37::



Public Member Functions

- OP37 ()

  default constructor

8.49.1 Detailed Description

represents the very fast industry standard precision operational amplifier OP37

{ OP37} represents the very fast industry standard precision operational amplifier OP37 which can be used both in DC (direct current) and in AC (alternate current) applications.

8.49.2 Constructor & Destructor Documentation

8.49.2.1 Ah::OP37::OP37 ()

default constructor

The documentation for this class was generated from the following file:

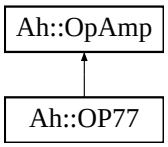
- AH/Etech/MiscOpAmps.h

8.50 Ah::OP77 Class Reference

represents the industry standard high precision operational amplifier OP77

`#include <MiscOpAmps.h>`

Inheritance diagram for Ah::OP77::



Public Member Functions

- OP77 ()
  default constructor

8.50.1 Detailed Description

represents the industry standard high precision operational amplifier OP77

{ OP77} represents the industry standard high precision operational amplifier OP77 which can be used both in DC (direct current) and in AC (alternate current) applications.

8.50.2 Constructor & Destructor Documentation

8.50.2.1 Ah::OP77::OP77 ()

default constructor

The documentation for this class was generated from the following file:

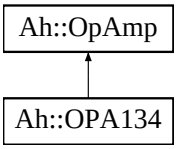
- AH/Etech/MiscOpAmps.h

8.51 Ah::OPA134 Class Reference

represents the Sound-Plus operational amplifier OPA134

`#include <BurrBrownOpAmps.h>`

Inheritance diagram for Ah::OPA134::



Public Member Functions

- OPA134 ()

  default constructor

8.51.1 Detailed Description

represents the Sound-Plus operational amplifier OPA134

{ OPA134} represents the Sound-Plus operational amplifier OPA134 made by Burr-Brown, which can be used both in DC (direct current) and in AC (alternate current) applications.

8.51.2 Constructor & Destructor Documentation

8.51.2.1 Ah::OPA134::OPA134 ()

default constructor

The documentation for this class was generated from the following file:

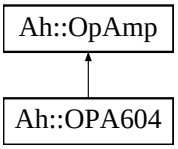
- AH/Etech/BurrBrownOpAmps.h

8.52 Ah::OPA604 Class Reference

represents the audio operational amplifier OPA604

`#include <BurrBrownOpAmps.h>`

Inheritance diagram for Ah::OPA604::



Public Member Functions

- OPA604 ()

  default constructor

8.52.1 Detailed Description

represents the audio operational amplifier OPA604

{ OPA604} represents the audio operational amplifier OPA604 made by Burr-Brown, which can be used both in DC (direct current) and in AC (alternate current) applications.

8.52.2 Constructor & Destructor Documentation

8.52.2.1 Ah::OPA604::OPA604 ()

default constructor

The documentation for this class was generated from the following file:

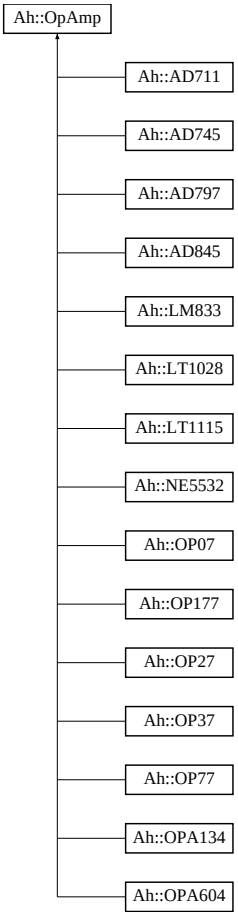
- AH/Etech/BurrBrownOpAmps.h

8.53 Ah::OpAmp Class Reference

represents an operational amplifier

`#include <OpAmp.h>`

Inheritance diagram for Ah::OpAmp::



Public Member Functions

- OpAmp ()

  default constructor

- OpAmp (const char *name, Dbl a0, Dbl ft)

  simple constructor

- OpAmp (const char *name, Dbl a0, Dbl ft, Dbl rout, Dbl en=0, Dbl fgen=0.001, Dbl in=0, Dbl fgin=0.001)

  complete constructor

- OpAmp (const OpAmp &op)

  copy constructor

- virtual ~OpAmp ()

  destructor:

- const char * getName () const

  return name of operational amplifier

- virtual const Cplx * getAd (Dbl freq)

  get differential open loop amplification at frequency { freq}

- virtual const Impedance * getZin (Dbl freq)

  get open loop input impedance at frequency { freq}

- virtual const Impedance * getZout (Dbl freq)

  get open loop output impedance at frequency { freq}

- const OpAmp & operator= (const OpAmp &op)

  assign operator

Protected Attributes

- Dbl f
- Cplx Af
- const char * Name
- Dbl A0
- Dbl Fg
- Dbl En
- Dbl FgEn
- Dbl In
- Dbl FgIn
- Resistor * Rout
- Resistor * Rin
- Capacitor * Cin

8.53.1 Detailed Description

represents an operational amplifier

{ OpAmp} represents a real operational amplifier which can be used both in DC (direct current) and in AC (alternate current) applications.

8.53.2 Constructor & Destructor Documentation

8.53.2.1 Ah::OpAmp::OpAmp ()

default constructor

8.53.2.2 Ah::OpAmp::OpAmp (const char * *name*, Dbl *a0*, Dbl *ft*)

simple constructor

8.53.2.3 Ah::OpAmp::OpAmp (const char * *name*, Dbl *a0*, Dbl *ft*, Dbl *rout*, Dbl *en* = 0, Dbl *fgen* = 0.001, Dbl *in* = 0, Dbl *fgin* = 0.001)

complete constructor

8.53.2.4 Ah::OpAmp::OpAmp (const OpAmp & *op*)

copy constructor

8.53.2.5 virtual Ah::OpAmp::~OpAmp () [virtual]

destructor:

8.53.3 Member Function Documentation

8.53.3.1 virtual const Cplx* Ah::OpAmp::getAd (Dbl *freq*) [virtual]

get differential open loop amplification at frequency { freq}

8.53.3.2 const char* Ah::OpAmp::getName () const [inline]

return name of operational amplifier

8.53.3.3 virtual const Impedance* Ah::OpAmp::getZin (Dbl *freq*) [virtual]

get open loop input impedance at frequency { freq}

8.53.3.4 virtual const Impedance* Ah::OpAmp::getZout (Dbl *freq*) [virtual]

get open loop output impedance at frequency { freq}

8.53.3.5 const OpAmp& Ah::OpAmp::operator= (const OpAmp & *op*)

assign operator

8.53.4 Member Data Documentation

8.53.4.1 Dbl Ah::OpAmp::A0 [protected]

8.53.4.2 Cplx Ah::OpAmp::Af [protected]

8.53.4.3 Capacitor* Ah::OpAmp::Cin [protected]

8.53.4.4 Dbl Ah::OpAmp::En [protected]

8.53.4.5 Dbl Ah::OpAmp::f [protected]

8.53.4.6 Dbl Ah::OpAmp::Fg [protected]

8.53.4.7 Dbl Ah::OpAmp::FgEn [protected]

8.53.4.8 Dbl Ah::OpAmp::FgIn [protected]

8.53.4.9 Dbl Ah::OpAmp::In [protected]

8.53.4.10 const char* Ah::OpAmp::Name [protected]

8.53.4.11 Resistor* Ah::OpAmp::Rin [protected]

8.53.4.12 Resistor* Ah::OpAmp::Rout [protected]

The documentation for this class was generated from the following file:

- AH/Etech/OpAmp.h

8.54 Ah::OpAmpCreator Class Reference

represents the OpAmp creator class

`#include <OpAmpCreator.h>`

Public Member Functions

- OpAmpCreator ()
  default constructor
- virtual ~OpAmpCreator ()
  virtual destructor
- virtual OpAmp * create (const char *model=0, const char *company=0) const
  create instance of specified opAmp

8.54.1 Detailed Description

represents the OpAmp creator class

{ OpAmpCreator} represents a creator class for all operational amplifiers within {*libEtech}*.

8.54.2 Constructor & Destructor Documentation

8.54.2.1 Ah::OpAmpCreator::OpAmpCreator () [inline]

default constructor

8.54.2.2 virtual Ah::OpAmpCreator::~OpAmpCreator () [inline, virtual]

virtual destructor

8.54.3 Member Function Documentation

8.54.3.1 virtual OpAmp* Ah::OpAmpCreator::create (const char * *model* = 0, const char * *company* = 0) const [virtual]

create instance of specified opAmp

The documentation for this class was generated from the following file:

- AH/Etech/OpAmpCreator.h

8.55 Ah::PhysConst Class Reference

represents some physical constants

`#include <PhysConst.h>`

Static Public Attributes

- static const Dbl Boltzmann = 1.381e-23
  Boltzmann constant.
- static const Dbl eps0 = 1.6e-19
  eps0
- static const Dbl t25 = 298.13
  temperature of 25 degree Celsius in Kelvin

8.55.1 Detailed Description

represents some physical constants

{ PhysConst} is a class containing some physical constants.

8.55.2 Member Data Documentation

8.55.2.1 const Dbl Ah::PhysConst::Boltzmann = 1.381e-23 [static]

Boltzmann constant.

8.55.2.2 const Dbl Ah::PhysConst::eps0 = 1.6e-19 [static]

eps0

8.55.2.3 const Dbl Ah::PhysConst::t25 = 298.13 [static]

temperature of 25 degree Celsius in Kelvin

The documentation for this class was generated from the following file:

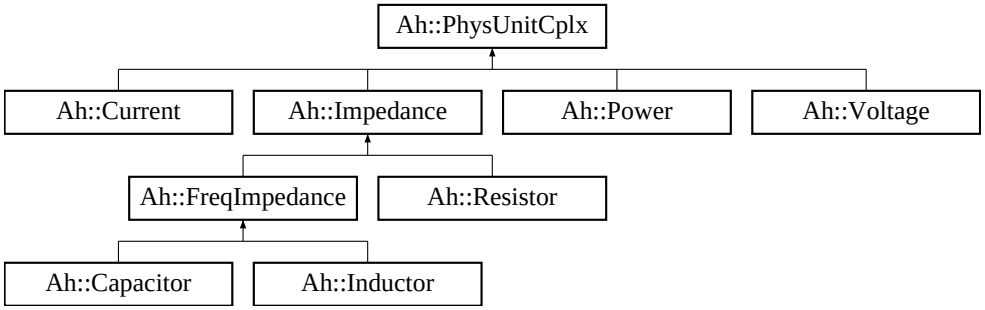
- AH/Etech/PhysConst.h

8.56 Ah::PhysUnitCplx Class Reference

represents a complex physical unit

`#include <PhysUnit.h>`

Inheritance diagram for Ah::PhysUnitCplx::



Public Member Functions

- PhysUnitCplx (const char *u, Dbl r=0.0, Dbl i=0.0)

  constructor

- PhysUnitCplx (const char *u, const Cplx &val)

  constructor

- PhysUnitCplx (const PhysUnitCplx &puc)

  copy constructor

- bool isInf () const

  return { true} if value is infinity

- bool isNul () const

  return { true} if value is null

- bool isValid () const

  return { true} if value is valid (neither null nor infinity)

- Cplx getVal () const

  return value of unit

Protected Attributes

- Cplx Value
- const char * Unit

Friends

- std::ostream & operator<< (std::ostream &out, const PhysUnitCplx &puc)

  overloaded operator for output into streams

- Cplx operator+ (const PhysUnitCplx &puc1, const PhysUnitCplx &puc2)

  overloaded operator for addition of two { PhysUnitCplx} objects

- Cplx operator+ (const PhysUnitCplx &puc, const Cplx &dc)

  overloaded operator for addition of { PhysUnitCplx} + { Cplx}

- Cplx operator+ (const Cplx &dc, const PhysUnitCplx &puc)

  overloaded operator for addition of { Cplx} + { PhysUnitCplx}

- Cplx operator- (const PhysUnitCplx &puc1, const PhysUnitCplx &puc2)

  overloaded operator for subtraction of two { PhysUnitCplx} objects

- Cplx operator- (const PhysUnitCplx &puc, const Cplx &dc)

  overloaded operator for subtraction of { PhysUnitCplx} - { Cplx}

- Cplx operator- (const Cplx &dc, const PhysUnitCplx &puc)

  overloaded operator for subtraction of { Cplx} - { PhysUnitCplx}

- Cplx operator * (const PhysUnitCplx &puc1, const PhysUnitCplx &puc2)

  overloaded operator for multiplication of two { PhysUnitCplx} objects

- Cplx operator * (const PhysUnitCplx &puc, const Cplx &dc)

  *overloaded operator for multiplication of { PhysUnitCplx} * { Cplx}*

- Cplx operator * (const Cplx &dc, const PhysUnitCplx &puc)

  *overloaded operator for multiplication of { Cplx} * { PhysUnitCplx}*

- Cplx operator/ (const PhysUnitCplx &puc1, const PhysUnitCplx &puc2)

  overloaded operator for division of two { PhysUnitCplx} objects

- Cplx operator/ (const PhysUnitCplx &puc, const Cplx &dc)

  overloaded operator for division of { PhysUnitCplx} / { Cplx}

- Cplx operator/ (const Cplx &dc, const PhysUnitCplx &puc)

  overloaded operator for division of { Cplx} / { PhysUnitCplx}

- Dbl abs (const PhysUnitCplx &puc)

  return absolute of value of a { PhysUnitCplx} object

- Dbl arg (const PhysUnitCplx &puc)

  return argument of value of a { PhysUnitCplx} object

8.56.1 Detailed Description

represents a complex physical unit

{ PhysUnitCplx} is the base class for all complex physical units, e.g voltage, current, impedances and so forth.

8.56.2 Constructor & Destructor Documentation

8.56.2.1 Ah::PhysUnitCplx::PhysUnitCplx (const char * *u*, Dbl *r* = 0.0, Dbl *i* = 0.0) [inline]

constructor

8.56.2.2 Ah::PhysUnitCplx::PhysUnitCplx (const char * *u*, const Cplx & *val*) [inline]

constructor

8.56.2.3 Ah::PhysUnitCplx::PhysUnitCplx (const PhysUnitCplx & *puc*) [inline]

copy constructor

8.56.3 Member Function Documentation

8.56.3.1 Cplx Ah::PhysUnitCplx::getVal () const [inline]

return value of unit

8.56.3.2 bool Ah::PhysUnitCplx::isInf () const [inline]

return { true} if value is infinity

8.56.3.3 bool Ah::PhysUnitCplx::isNul () const [inline]

return { true} if value is null

8.56.3.4 bool Ah::PhysUnitCplx::isValid () const [inline]

return { true} if value is valid (neither null nor infinity)

8.56.4 Friends And Related Function Documentation

8.56.4.1 Dbl abs (const PhysUnitCplx & *puc*) [friend]

return absolute of value of a { PhysUnitCplx} object

8.56.4.2 Dbl arg (const PhysUnitCplx & *puc*) [friend]

return argument of value of a { PhysUnitCplx} object

8.56.4.3 Cplx operator * (const Cplx & *dc*, const PhysUnitCplx & *puc*) [friend]

overloaded operator for multiplication of { Cplx} * { PhysUnitCplx}

8.56.4.4 Cplx operator * (const PhysUnitCplx & *puc*, const Cplx & *dc*) [friend]

overloaded operator for multiplication of { PhysUnitCplx} * { Cplx}

8.56.4.5 Cplx operator * (const PhysUnitCplx & *puc1*, const PhysUnitCplx & *puc2*) [friend]

overloaded operator for multiplication of two { PhysUnitCplx} objects

8.56.4.6 Cplx operator+ (const Cplx & *dc*, const PhysUnitCplx & *puc*) [friend]

overloaded operator for addition of { Cplx} + { PhysUnitCplx}

8.56.4.7 Cplx operator+ (const PhysUnitCplx & *puc*, const Cplx & *dc*) [friend]

overloaded operator for addition of { PhysUnitCplx} + { Cplx}

8.56.4.8 Cplx operator+ (const PhysUnitCplx & *puc1*, const PhysUnitCplx & *puc2*) [friend]

overloaded operator for addition of two { PhysUnitCplx} objects

8.56.4.9 Cplx operator- (const Cplx & *dc*, const PhysUnitCplx & *puc*) [friend]

overloaded operator for subtraction of { Cplx} - { PhysUnitCplx}

8.56.4.10 Cplx operator- (const PhysUnitCplx & *puc*, const Cplx & *dc*) [friend]

overloaded operator for subtraction of { PhysUnitCplx} - { Cplx}

8.56.4.11 Cplx operator- (const PhysUnitCplx & *puc1*, const PhysUnitCplx & *puc2*) [friend]

overloaded operator for subtraction of two { PhysUnitCplx} objects

8.56.4.12 Cplx operator/ (const Cplx & *dc*, const PhysUnitCplx & *puc*) [friend]

overloaded operator for division of { Cplx} / { PhysUnitCplx}

8.56.4.13 Cplx operator/ (const PhysUnitCplx & *puc*, const Cplx & *dc*) [friend]

overloaded operator for division of { PhysUnitCplx} / { Cplx}

8.56.4.14 Cplx operator/ (const PhysUnitCplx & *puc1*, const PhysUnitCplx & *puc2*) [friend]

overloaded operator for division of two { PhysUnitCplx} objects

8.56.4.15 std::ostream& operator<< (std::ostream & *out*, const PhysUnitCplx & *puc*) [friend]

overloaded operator for output into streams

8.56.5 Member Data Documentation

8.56.5.1 const char* Ah::PhysUnitCplx::Unit [protected]

8.56.5.2 Cplx Ah::PhysUnitCplx::Value [protected]

The documentation for this class was generated from the following file:

- AH/Etech/PhysUnit.h

8.57 Ah::PhysUnitDbl Class Reference

represents a scalar physical unit

`#include <PhysUnit.h>`

Public Member Functions

- PhysUnitDbl (const char *u, Dbl v=0.0)
  constructor
- PhysUnitDbl (const char *u, const Dbl &val)
  constructor
- PhysUnitDbl (const PhysUnitDbl &pud)
  copy constructor
- virtual ~PhysUnitDbl ()
  destructor
- virtual Dbl getVal () const
  return value of unit

Protected Attributes

- Dbl Value
- const char * Unit

Friends

- std::ostream & operator<< (std::ostream &out, const PhysUnitDbl &pud)
  overloaded operator for output into streams
- Dbl abs (const PhysUnitDbl &pud)
  return absolute of value of a { PhysUnitDbl} object
- Dbl arg (const PhysUnitDbl &)
  return argument of value of a { PhysUnitDbl} object (here always 0)

8.57.1 Detailed Description

represents a scalar physical unit

{ PhysUnitDbl} is the base class for all scalar physical units, e.g temperature, distances and so forth.

8.57.2 Constructor & Destructor Documentation

8.57.2.1 Ah::PhysUnitDbl::PhysUnitDbl (const char * *u*, Dbl *v* = 0.0) [inline]

constructor

8.57.2.2 Ah::PhysUnitDbl::PhysUnitDbl (const char * *u*, const Dbl & *val*) [inline]

constructor

8.57.2.3 Ah::PhysUnitDbl::PhysUnitDbl (const PhysUnitDbl & *pud*) [inline]

copy constructor

8.57.2.4 virtual Ah::PhysUnitDbl::~PhysUnitDbl () [inline, virtual]

destructor

8.57.3 Member Function Documentation

8.57.3.1 virtual Dbl Ah::PhysUnitDbl::getVal () const [inline, virtual]

return value of unit

8.57.4 Friends And Related Function Documentation

8.57.4.1 Dbl abs (const PhysUnitDbl & *pud*) [friend]

return absolute of value of a { PhysUnitDbl} object

8.57.4.2 Dbl arg (const PhysUnitDbl &) [friend]

return argument of value of a { PhysUnitDbl} object (here always 0)

8.57.4.3 std::ostream& operator<< (std::ostream & *out*, const PhysUnitDbl & *pud*) [friend]

overloaded operator for output into streams

8.57.5 Member Data Documentation

8.57.5.1 const char* Ah::PhysUnitDbl::Unit [protected]

8.57.5.2 Dbl Ah::PhysUnitDbl::Value [protected]

The documentation for this class was generated from the following file:

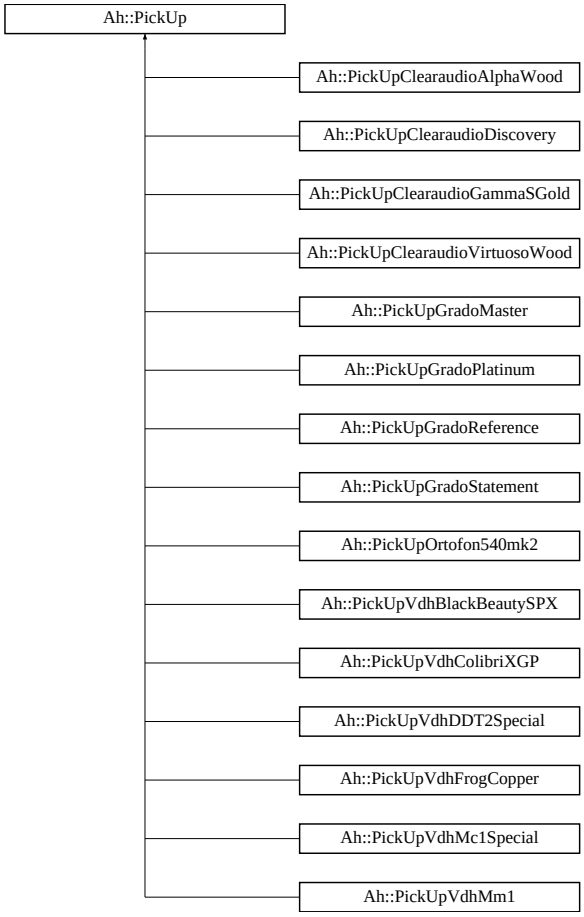
- AH/Etech/PhysUnit.h

8.58 Ah::PickUp Class Reference

represents a pickup of a record player

`#include <PickUp.h>`

Inheritance diagram for Ah::PickUp::



Public Member Functions

- PickUp ()

  default constructor

- PickUp (const char *name, Dbl r, Dbl l, Dbl c)

  constructor

- PickUp (const PickUp &op)

  copy constructor

- virtual ~PickUp ()

  destructor:

- const char * getName () const

  return name of pickup

- virtual Cplx getAtt (Dbl f, const Impedance &z)

  get attenuation at frequency { f} for load impedanze { z}

- const PickUp & operator= (const PickUp &op)

  assign operator

8.58.1 Detailed Description

represents a pickup of a record player

{ PickUp} represents a pickup of a record player.

8.58.2 Constructor & Destructor Documentation

8.58.2.1 Ah::PickUp::PickUp ()

default constructor

8.58.2.2 Ah::PickUp::PickUp (const char * *name*, Dbl *r*, Dbl *l*, Dbl *c*)

constructor

8.58.2.3 Ah::PickUp::PickUp (const PickUp & *op*)

copy constructor

8.58.2.4 virtual Ah::PickUp::~PickUp () [virtual]

destructor:

8.58.3 Member Function Documentation

8.58.3.1 virtual Cplx Ah::PickUp::getAtt (Dbl *f*, const Impedance & *z*) [virtual]

get attenuation at frequency { f} for load impedanze { z}

8.58.3.2 const char* Ah::PickUp::getName () const [inline]

return name of pickup

8.58.3.3 const PickUp& Ah::PickUp::operator= (const PickUp & *op*)

assign operator

The documentation for this class was generated from the following file:

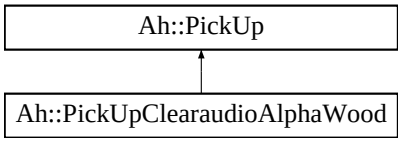
- AH/Etech/PickUp.h

8.59 Ah::PickUpClearaudioAlphaWood Class Reference

Clearaudio Alpha Wood (data supplied by Frank Klemm).

`#include <PickUp.h>`

Inheritance diagram for Ah::PickUpClearaudioAlphaWood::



Public Member Functions

- PickUpClearaudioAlphaWood ()
  default constructor
- virtual ~PickUpClearaudioAlphaWood ()
  destructor:

8.59.1 Detailed Description

Clearaudio Alpha Wood (data supplied by Frank Klemm).

8.59.2 Constructor & Destructor Documentation

8.59.2.1 Ah::PickUpClearaudioAlphaWood::PickUpClearaudioAlphaWood () `[inline]`

default constructor

8.59.2.2 virtual Ah::PickUpClearaudioAlphaWood::~PickUpClearaudioAlphaWood () `[inline, virtual]`

destructor:

The documentation for this class was generated from the following file:

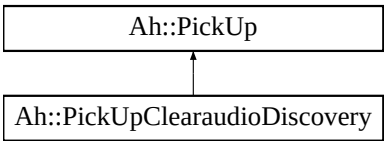
- AH/Etech/PickUp.h

8.60 Ah::PickUpClearaudioDiscovery Class Reference

Clearaudio Discovery (data supplied by Frank Klemm).

`#include <PickUp.h>`

Inheritance diagram for Ah::PickUpClearaudioDiscovery::



Public Member Functions

- PickUpClearaudioDiscovery ()
  default constructor
- virtual ~PickUpClearaudioDiscovery ()
  destructor:

8.60.1 Detailed Description

Clearaudio Discovery (data supplied by Frank Klemm).

8.60.2 Constructor & Destructor Documentation

8.60.2.1 Ah::PickUpClearaudioDiscovery::PickUpClearaudioDiscovery () `[inline]`

default constructor

8.60.2.2 virtual Ah::PickUpClearaudioDiscovery::~PickUpClearaudioDiscovery () `[inline, virtual]`

destructor:

The documentation for this class was generated from the following file:

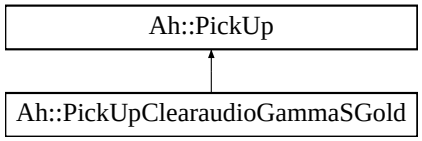
- AH/Etech/PickUp.h

8.61 Ah::PickUpClearaudioGammaSGold Class Reference

Clearaudio Gamma S Gold (data supplied by Frank Klemm).

`#include <PickUp.h>`

Inheritance diagram for Ah::PickUpClearaudioGammaSGold::



Public Member Functions

- PickUpClearaudioGammaSGold ()
  default constructor
- virtual ~PickUpClearaudioGammaSGold ()
  destructor:

8.61.1 Detailed Description

Clearaudio Gamma S Gold (data supplied by Frank Klemm).

8.61.2 Constructor & Destructor Documentation

8.61.2.1 Ah::PickUpClearaudioGammaSGold::PickUpClearaudioGammaSGold () `[inline]`

default constructor

8.61.2.2 virtual Ah::PickUpClearaudioGammaSGold::~PickUpClearaudioGammaSGold () `[inline, virtual]`

destructor:

The documentation for this class was generated from the following file:

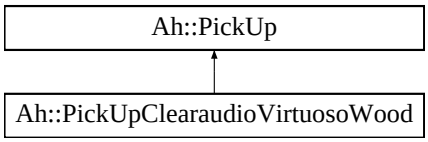
- AH/Etech/PickUp.h

8.62 Ah::PickUpClearaudioVirtuosoWood Class Reference

Clearaudio Virtuoso Wood (data supplied by Frank Klemm).

`#include <PickUp.h>`

Inheritance diagram for Ah::PickUpClearaudioVirtuosoWood::



Public Member Functions

- PickUpClearaudioVirtuosoWood ()
  default constructor
- virtual ~PickUpClearaudioVirtuosoWood ()
  destructor:

8.62.1 Detailed Description

Clearaudio Virtuoso Wood (data supplied by Frank Klemm).

8.62.2 Constructor & Destructor Documentation

8.62.2.1 Ah::PickUpClearaudioVirtuosoWood::PickUpClearaudioVirtuosoWood () `[inline]`

default constructor

8.62.2.2 virtual Ah::PickUpClearaudioVirtuosoWood::~PickUpClearaudioVirtuosoWood () `[inline, virtual]`

destructor:

The documentation for this class was generated from the following file:

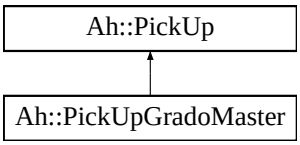
- AH/Etech/PickUp.h

8.63 Ah::PickUpGradoMaster Class Reference

Grado Master (data supplied by Frank Klemm).

`#include <PickUp.h>`

Inheritance diagram for Ah::PickUpGradoMaster::



Public Member Functions

- PickUpGradoMaster ()
  default constructor
- virtual ~PickUpGradoMaster ()
  destructor:

8.63.1 Detailed Description

Grado Master (data supplied by Frank Klemm).

8.63.2 Constructor & Destructor Documentation

8.63.2.1 Ah::PickUpGradoMaster::PickUpGradoMaster () `[inline]`

default constructor

8.63.2.2 virtual Ah::PickUpGradoMaster::~PickUpGradoMaster () `[inline, virtual]`

destructor:

The documentation for this class was generated from the following file:

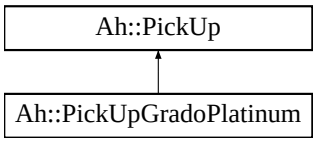
- AH/Etech/PickUp.h

8.64 Ah::PickUpGradoPlatinum Class Reference

Grado Platinum (data supplied by Frank Klemm).

`#include <PickUp.h>`

Inheritance diagram for Ah::PickUpGradoPlatinum::



Public Member Functions

- PickUpGradoPlatinum ()
  default constructor
- virtual ~PickUpGradoPlatinum ()
  destructor:

8.64.1 Detailed Description

Grado Platinum (data supplied by Frank Klemm).

8.64.2 Constructor & Destructor Documentation

8.64.2.1 Ah::PickUpGradoPlatinum::PickUpGradoPlatinum () `[inline]`

default constructor

8.64.2.2 virtual Ah::PickUpGradoPlatinum::~PickUpGradoPlatinum () `[inline, virtual]`

destructor:

The documentation for this class was generated from the following file:

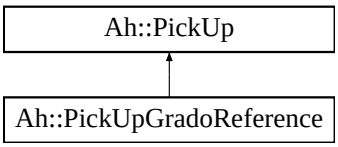
- AH/Etech/PickUp.h

8.65 Ah::PickUpGradoReference Class Reference

Grado Reference (data supplied by Frank Klemm).

`#include <PickUp.h>`

Inheritance diagram for Ah::PickUpGradoReference::



Public Member Functions

- PickUpGradoReference ()
  default constructor
- virtual ~PickUpGradoReference ()
  destructor:

8.65.1 Detailed Description

Grado Reference (data supplied by Frank Klemm).

8.65.2 Constructor & Destructor Documentation

8.65.2.1 Ah::PickUpGradoReference::PickUpGradoReference () [inline]

default constructor

8.65.2.2 virtual Ah::PickUpGradoReference::~PickUpGradoReference () [inline, virtual]

destructor:

The documentation for this class was generated from the following file:

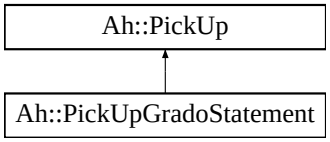
- AH/Etech/PickUp.h

8.66 Ah::PickUpGradoStatement Class Reference

Grado The Statement (data supplied by Frank Klemm).

`#include <PickUp.h>`

Inheritance diagram for Ah::PickUpGradoStatement::



Public Member Functions

- PickUpGradoStatement ()
  default constructor
- virtual ~PickUpGradoStatement ()
  destructor:

8.66.1 Detailed Description

Grado The Statement (data supplied by Frank Klemm).

8.66.2 Constructor & Destructor Documentation

8.66.2.1 Ah::PickUpGradoStatement::PickUpGradoStatement () [inline]

default constructor

8.66.2.2 virtual Ah::PickUpGradoStatement::~PickUpGradoStatement () [inline, virtual]

destructor:

The documentation for this class was generated from the following file:

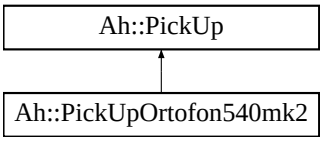
- AH/Etech/PickUp.h

8.67 Ah::PickUpOrtofon540mk2 Class Reference

Ortofon 540 MK2 (example supplied by Frank Klemm in drmh).

`#include <PickUp.h>`

Inheritance diagram for Ah::PickUpOrtofon540mk2::



Public Member Functions

- PickUpOrtofon540mk2 ()
  default constructor
- virtual ~PickUpOrtofon540mk2 ()
  destructor:

8.67.1 Detailed Description

Ortofon 540 MK2 (example supplied by Frank Klemm in drmh).

8.67.2 Constructor & Destructor Documentation

8.67.2.1 Ah::PickUpOrtofon540mk2::PickUpOrtofon540mk2 () `[inline]`

default constructor

8.67.2.2 virtual Ah::PickUpOrtofon540mk2::~PickUpOrtofon540mk2 () `[inline, virtual]`

destructor:

The documentation for this class was generated from the following file:

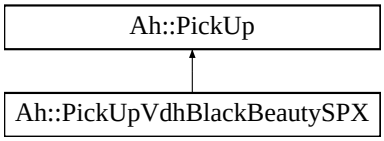
- AH/Etech/PickUp.h

8.68 Ah::PickUpVdhBlackBeautySPX Class Reference

Van den Hul Black Beauty SPX (data supplied by Frank Klemm).

`#include <PickUp.h>`

Inheritance diagram for Ah::PickUpVdhBlackBeautySPX::



Public Member Functions

- PickUpVdhBlackBeautySPX ()
  default constructor
- virtual ~PickUpVdhBlackBeautySPX ()
  destructor:

8.68.1 Detailed Description

Van den Hul Black Beauty SPX (data supplied by Frank Klemm).

8.68.2 Constructor & Destructor Documentation

8.68.2.1 Ah::PickUpVdhBlackBeautySPX::PickUpVdhBlackBeautySPX () [inline]

default constructor

8.68.2.2 virtual Ah::PickUpVdhBlackBeautySPX::~PickUpVdhBlackBeautySPX () [inline, virtual]

destructor:

The documentation for this class was generated from the following file:

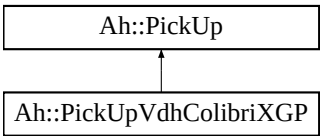
- AH/Etech/PickUp.h

8.69 Ah::PickUpVdhColibriXGP Class Reference

Van den Hul The Colibri XGP (data supplied by Frank Klemm).

`#include <PickUp.h>`

Inheritance diagram for Ah::PickUpVdhColibriXGP::



Public Member Functions

- PickUpVdhColibriXGP ()
  default constructor
- virtual ~PickUpVdhColibriXGP ()
  destructor:

8.69.1 Detailed Description

Van den Hul The Colibri XGP (data supplied by Frank Klemm).

8.69.2 Constructor & Destructor Documentation

8.69.2.1 Ah::PickUpVdhColibriXGP::PickUpVdhColibriXGP () `[inline]`

default constructor

8.69.2.2 virtual Ah::PickUpVdhColibriXGP::~PickUpVdhColibriXGP () `[inline, virtual]`

destructor:

The documentation for this class was generated from the following file:

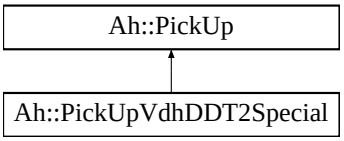
- AH/Etech/PickUp.h

8.70 Ah::PickUpVdhDDT2Special Class Reference

Van den Hul DDT II Special (data supplied by Frank Klemm).

`#include <PickUp.h>`

Inheritance diagram for Ah::PickUpVdhDDT2Special::



Public Member Functions

- PickUpVdhDDT2Special ()
  default constructor
- virtual ~PickUpVdhDDT2Special ()
  destructor:

8.70.1 Detailed Description

Van den Hul DDT II Special (data supplied by Frank Klemm).

8.70.2 Constructor & Destructor Documentation

8.70.2.1 Ah::PickUpVdhDDT2Special::PickUpVdhDDT2Special () `[inline]`

default constructor

8.70.2.2 virtual Ah::PickUpVdhDDT2Special::~PickUpVdhDDT2Special () `[inline, virtual]`

destructor:

The documentation for this class was generated from the following file:

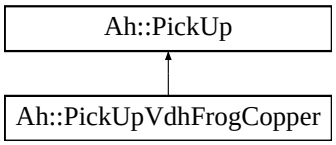
- AH/Etech/PickUp.h

8.71 Ah::PickUpVdhFrogCopper Class Reference

Van den Hul Frog Copper (data supplied by Frank Klemm).

`#include <PickUp.h>`

Inheritance diagram for Ah::PickUpVdhFrogCopper::



Public Member Functions

- PickUpVdhFrogCopper ()
  default constructor
- virtual ~PickUpVdhFrogCopper ()
  destructor:

8.71.1 Detailed Description

Van den Hul Frog Copper (data supplied by Frank Klemm).

8.71.2 Constructor & Destructor Documentation

8.71.2.1 Ah::PickUpVdhFrogCopper::PickUpVdhFrogCopper () `[inline]`

default constructor

8.71.2.2 virtual Ah::PickUpVdhFrogCopper::~PickUpVdhFrogCopper () `[inline, virtual]`

destructor:

The documentation for this class was generated from the following file:

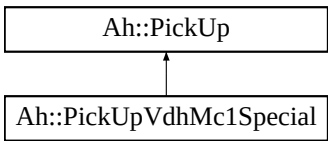
- AH/Etech/PickUp.h

8.72 Ah::PickUpVdhMc1Special Class Reference

Van den Hul MC-1 Special.

`#include <VdHPickUps.h>`

Inheritance diagram for Ah::PickUpVdhMc1Special::



Public Member Functions

- PickUpVdhMc1Special ()
  default constructor
- virtual ~PickUpVdhMc1Special ()
  destructor:

8.72.1 Detailed Description

Van den Hul MC-1 Special.

8.72.2 Constructor & Destructor Documentation

8.72.2.1 Ah::PickUpVdhMc1Special::PickUpVdhMc1Special () [inline]

default constructor

8.72.2.2 virtual Ah::PickUpVdhMc1Special::~PickUpVdhMc1Special () [inline, virtual]

destructor:

The documentation for this class was generated from the following file:

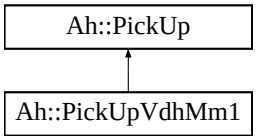
- AH/Etech/VdHPickUps.h

8.73 Ah::PickUpVdhMm1 Class Reference

Van den Hul MM-1.

`#include <VdHPickUps.h>`

Inheritance diagram for Ah::PickUpVdhMm1::



Public Member Functions

- PickUpVdhMm1 ()
  default constructor
- virtual ~PickUpVdhMm1 ()
  destructor:

8.73.1 Detailed Description

Van den Hul MM-1.

8.73.2 Constructor & Destructor Documentation

8.73.2.1 Ah::PickUpVdhMm1::PickUpVdhMm1 () [inline]

default constructor

8.73.2.2 virtual Ah::PickUpVdhMm1::~PickUpVdhMm1 () [inline, virtual]

destructor:

The documentation for this class was generated from the following file:

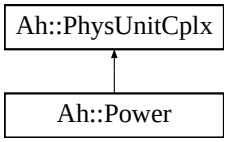
- AH/Etech/VdHPickUps.h

8.74 Ah::Power Class Reference

represents an electrical power

`#include <Power.h>`

Inheritance diagram for Ah::Power::



Public Member Functions

- Power (Dbl r=0.0, Dbl i=0.0)
  constructor
- Power (const Cplx &val)
  constructor
- Power (const Power &i)
  copy constructor

Friends

- Power operator+ (const Power &p1, const Power &p2)
  overloaded operator + for addition of two powers
- Power operator- (const Power &p1, const Power &p2)
  overloaded operator - for subtraction of two powers
- Power operator * (const Power &p1, const Cplx &k)
  *overloaded operator * for multiplication of { Power} * { Cplx}*
- Power operator * (const Cplx &k, const Power &p1)
  *overloaded operator * for multiplication of { Cplx} * { Power}*
- Cplx operator/ (const Power &p1, const Power &p2)
  overloaded operator / for division of { Power} / { Power}
- Power operator/ (const Power &p1, const Cplx &k)
  overloaded operator / for division of { Power} / { Cplx}
- bool operator== (const Power &p1, const Power &p2)
  overloaded operator == for comparison of two Powers
- bool operator!= (const Power &p1, const Power &p2)

overloaded operator != for comparison of two Powers

- bool operator< (const Power &p1, const Power &p2)
  overloaded operator < for comparison of two Powers
- bool operator> (const Power &p1, const Power &p2)
  overloaded operator > for comparison of two Powers

8.74.1 Detailed Description

represents an electrical power

{ Power} represents an electrical power which can be used both in DC (direct current) and in AC (alternate current) applications.

8.74.2 Constructor & Destructor Documentation

8.74.2.1 Ah::Power::Power (Dbl *r* = 0.0, Dbl *i* = 0.0) [inline]

constructor

8.74.2.2 Ah::Power::Power (const Cplx & *val*) [inline]

constructor

8.74.2.3 Ah::Power::Power (const Power & *i*) [inline]

copy constructor

8.74.3 Friends And Related Function Documentation

8.74.3.1 Power operator * (const Cplx & *k*, const Power & *p1*) [friend]

overloaded operator * for multiplication of { Cplx} * { Power}

8.74.3.2 Power operator * (const Power & *p1*, const Cplx & *k*) [friend]

overloaded operator * for multiplication of { Power} * { Cplx}

8.74.3.3 bool operator!= (const Power & *p1*, const Power & *p2*) [friend]

overloaded operator != for comparison of two Powers

8.74.3.4 Power operator+ (const Power & *p1*, const Power & *p2*) [friend]

overloaded operator + for addition of two powers

8.74.3.5 Power operator- (const Power & *p1*, const Power & *p2*) [friend]

overloaded operator - for subtraction of two powers

8.74.3.6 Power operator/ (const Power & *p1*, const Cplx & *k*) [friend]

overloaded operator / for division of { Power} / { Cplx}

8.74.3.7 Cplx operator/ (const Power & *p1*, const Power & *p2*) [friend]

overloaded operator / for division of { Power} / { Power}

8.74.3.8 bool operator< (const Power & *p1*, const Power & *p2*) [friend]

overloaded operator < for comparison of two Powers

8.74.3.9 bool operator== (const Power & *p1*, const Power & *p2*) [friend]

overloaded operator == for comparison of two Powers

8.74.3.10 bool operator> (const Power & *p1*, const Power & *p2*) [friend]

overloaded operator > for comparison of two Powers

The documentation for this class was generated from the following file:

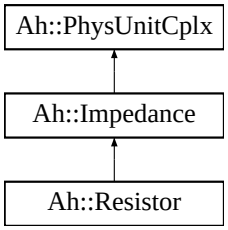
- AH/Etech/Power.h

8.75 Ah::Resistor Class Reference

represents an ideal electrical resistor

`#include <Resistor.h>`

Inheritance diagram for Ah::Resistor::



Public Member Functions

- Resistor (Dbl r=0.0)

  constructor

- Resistor (const Resistor &r)

  copy constructor

- Dbl getRes () const

  return resistance

Friends

- Resistor operator+ (const Resistor &r1, const Resistor &r2)

  overloaded operator + for serial circuit of two resistors

- Resistor operator|| (const Resistor &r1, const Resistor &r2)

  overloaded operator || for parallel circuit of two resistors

- Resistor operator * (const Resistor &r, Dbl k)

  *overloaded operator * for multiplication of { Resistor} * { Dbl}*

- Resistor operator * (Dbl k, const Resistor &r)

  *overloaded operator * for multiplication of{ Dbl} * { Resistor}*

- Resistor operator/ (const Resistor &r, Dbl k)

  overloaded operator / for division of { Resistor} / { Dbl}

- std::ostream & operator<< (std::ostream &out, const Resistor &r)

  overloaded operator for output into streams

8.75.1 Detailed Description

represents an ideal electrical resistor

{ Resistor} represents an ideal electrical resistor which can be used both in DC (direct current) and in AC (alternate current) applications.

8.75.2 Constructor & Destructor Documentation

8.75.2.1 Ah::Resistor::Resistor (Dbl *r* = 0.0) [inline]

constructor

8.75.2.2 Ah::Resistor::Resistor (const Resistor & *r*) [inline]

copy constructor

8.75.3 Member Function Documentation

8.75.3.1 Dbl Ah::Resistor::getRes () const [inline]

return resistance

8.75.4 Friends And Related Function Documentation

8.75.4.1 Resistor operator * (Dbl *k*, const Resistor & *r*) [friend]

overloaded operator * for multiplication of{ Dbl} * { Resistor}

8.75.4.2 Resistor operator * (const Resistor & *r*, Dbl *k*) [friend]

overloaded operator * for multiplication of { Resistor} * { Dbl}

8.75.4.3 Resistor operator+ (const Resistor & *r1*, const Resistor & *r2*) [friend]

overloaded operator + for serial circuit of two resistors

8.75.4.4 Resistor operator/ (const Resistor & *r*, Dbl *k*) [friend]

overloaded operator / for division of { Resistor} / { Dbl}

8.75.4.5 std::ostream& operator<< (std::ostream & *out*, const Resistor & *r*) [friend]

overloaded operator for output into streams

8.75.4.6 Resistor operator|| (const Resistor & *r1*, const Resistor & *r2*) [friend]

overloaded operator || for parallel circuit of two resistors

The documentation for this class was generated from the following file:

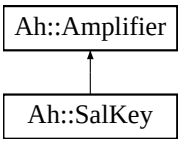
- AH/Etech/Resistor.h

8.76 Ah::SalKey Class Reference

Sallen-Key Filter.

`#include <SalKey.h>`

Inheritance diagram for Ah::SalKey::



Public Member Functions

- SalKey (const OpAmp &opamp, const Impedance &z1, const Impedance &z2, const Impedance &z3, const Impedance &z4, const Impedance &z5, const Impedance &z6)

  constructors:

- virtual ~SalKey ()

  destructor:

- virtual Cplx getA (Dbl freq)

  get amplification at frequency { freq}:

- virtual Cplx getA (Dbl freq, const Impedance &)

  get amplification at frequency { freq} with output { load}:

8.76.1 Detailed Description

Sallen-Key Filter.

{ SalKey} is a Sallen-Key Filter: a 2-pole filter using an operational amplifier.

8.76.2 Constructor & Destructor Documentation

8.76.2.1 Ah::SalKey::SalKey (const OpAmp & *opamp*, const Impedance & *z1*, const Impedance & *z2*, const Impedance & *z3*, const Impedance & *z4*, const Impedance & *z5*, const Impedance & *z6*) `[inline]`

constructors:

8.76.2.2 virtual Ah::SalKey::~SalKey () `[inline, virtual]`

destructor:

8.76.3 Member Function Documentation

8.76.3.1 virtual Cplx Ah::SalKey::getA (Dbl *freq*, const Impedance &) [inline, virtual]

get amplification at frequency { freq} with output { load}:

Implements Ah::Amplifier.

8.76.3.2 virtual Cplx Ah::SalKey::getA (Dbl *freq*) [virtual]

get amplification at frequency { freq}:

Implements Ah::Amplifier.

The documentation for this class was generated from the following file:

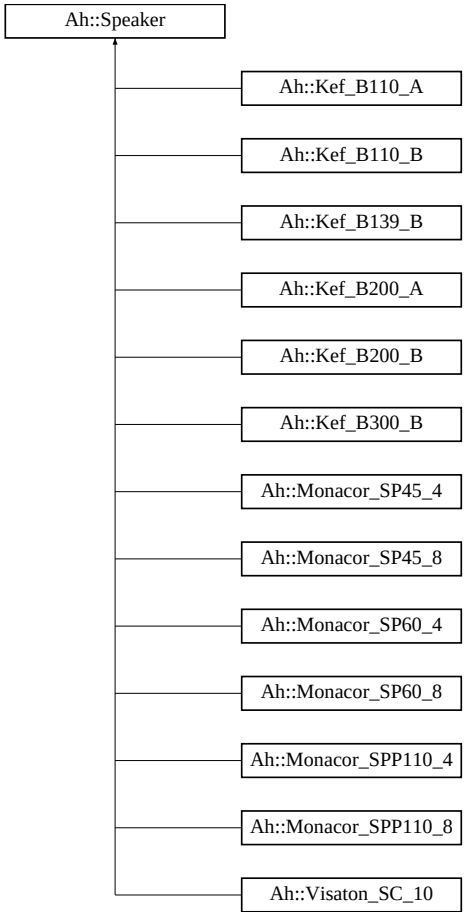
- AH/Etech/SalKey.h

8.77 Ah::Speaker Class Reference

represents a pure speaker system

`#include <Speaker.h>`

Inheritance diagram for Ah::Speaker::



Public Member Functions

- Speaker ()
  default constructor
- Speaker (const Speaker &s)
  copy constructor
- Speaker (const char *n)
  constructor
- virtual ~Speaker ()
  virtual destructor

- const char * getName () const
  get name of speaker
- Dbl getQt () const
  get overall damping factor
- Dbl getQe () const
  get electrical damping factor
- Dbl getQm () const
  get mechanical damping factor
- Dbl getFres () const
  get resonance frequency
- Dbl getVa () const
  get equivalent volume
- virtual Dbl getSpl (Dbl freq) const
  get acoustic power level dB/W/m at specified frequency
- virtual Impedance getImp (Dbl freq) const
  get impedance of voice coil at specified frequency
- const Speaker & operator= (const Speaker &s)
  assignment operator

Protected Attributes

- Dbl Rdc
- Dbl Ls
- Dbl Fr
- Dbl Qm
- Dbl Qe
- Dbl Qt
- Dbl Va
- Dbl Spl

8.77.1 Detailed Description

represents a pure speaker system

{ Speaker} represents a real speaker system.

8.77.2 Constructor & Destructor Documentation

8.77.2.1 Ah::Speaker::Speaker ()

default constructor

8.77.2.2 Ah::Speaker::Speaker (const Speaker & *s*)

copy constructor

8.77.2.3 Ah::Speaker::Speaker (const char * *n*)

constructor

8.77.2.4 virtual Ah::Speaker::~Speaker () [inline, virtual]

virtual destructor

8.77.3 Member Function Documentation

8.77.3.1 Dbl Ah::Speaker::getFres () const [inline]

get resonance frequency

8.77.3.2 virtual Impedance Ah::Speaker::getImp (Dbl *freq*) const [virtual]

get impedance of voice coil at specified frequency

8.77.3.3 const char* Ah::Speaker::getName () const [inline]

get name of speaker

8.77.3.4 Dbl Ah::Speaker::getQe () const [inline]

get electrical damping factor

8.77.3.5 Dbl Ah::Speaker::getQm () const [inline]

get mechanical damping factor

8.77.3.6 Dbl Ah::Speaker::getQt () const [inline]

get overall damping factor

8.77.3.7 virtual Dbl Ah::Speaker::getSpl (Dbl *freq*) const [virtual]

get acoustic power level dB/W/m at specified frequency

Reimplemented in Ah::Monacor_SPP110_8, and Ah::Visaton_SC_10.

8.77.3.8 Dbl Ah::Speaker::getVa () const [inline]

get equivalent volume

8.77.3.9 const Speaker& Ah::Speaker::operator= (const Speaker & *s*)

assignment operator

8.77.4 Member Data Documentation

8.77.4.1 Dbl Ah::Speaker::Fr [protected]

8.77.4.2 Dbl Ah::Speaker::Ls [protected]

8.77.4.3 Dbl Ah::Speaker::Qe [protected]

8.77.4.4 Dbl Ah::Speaker::Qm [protected]

8.77.4.5 Dbl Ah::Speaker::Qt [protected]

8.77.4.6 Dbl Ah::Speaker::Rdc [protected]

8.77.4.7 Dbl Ah::Speaker::Spl [protected]

8.77.4.8 Dbl Ah::Speaker::Va [protected]

The documentation for this class was generated from the following file:

- AH/Etech/Speaker.h

8.78 Ah::SpeakerCreator Class Reference

represents the speaker creator class

`#include <SpeakerCreator.h>`

Public Member Functions

- SpeakerCreator ()
  default constructor
- virtual ~SpeakerCreator ()
  virtual destructor
- virtual Speaker * create (const char *company, const char *model) const
  create instance of specified speaker

8.78.1 Detailed Description

represents the speaker creator class

{ SpeakerCreator} represents a creator class for all speakers within {*libEtech}*.

8.78.2 Constructor & Destructor Documentation

8.78.2.1 Ah::SpeakerCreator::SpeakerCreator () [inline]

default constructor

8.78.2.2 virtual Ah::SpeakerCreator::~SpeakerCreator () [inline, virtual]

virtual destructor

8.78.3 Member Function Documentation

8.78.3.1 virtual Speaker* Ah::SpeakerCreator::create (const char * *company*, const char * *model*) const [virtual]

create instance of specified speaker

The documentation for this class was generated from the following file:

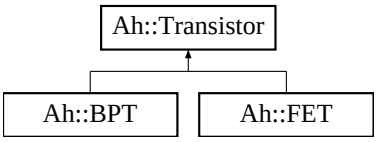
- AH/Etech/SpeakerCreator.h

8.79 Ah::Transistor Class Reference

represents a generic transistor

`#include <Transistor.h>`

Inheritance diagram for Ah::Transistor::



Public Member Functions

- virtual ~Transistor ()
  destructor
- virtual Cplx getS (const Voltage &u, Dbl t=PhysConst_T25) const =0
  return steilheit
- virtual Cplx getS (const Current &i, Dbl t=PhysConst_T25) const =0
  return steilheit
- virtual Current getIout (const Voltage &Uin, Dbl t=PhysConst_T25) const =0
  return output current depending on input voltage

8.79.1 Detailed Description

represents a generic transistor

{ Transistor} is a pure virtual transistor base class, which just defines the common interface to all Transistors.

8.79.2 Constructor & Destructor Documentation

8.79.2.1 virtual Ah::Transistor::~Transistor () `[inline, virtual]`

destructor

8.79.3 Member Function Documentation

8.79.3.1 virtual Current Ah::Transistor::getIout (const Voltage & *Uin*, Dbl *t* = `PhysConst_T25`) const `[pure virtual]`

return output current depending on input voltage

Implemented in Ah::BPT, and Ah::FET.

8.79.3.2 virtual Cplx Ah::Transistor::getS (const Current & *i*, Dbl *t* = PhysConst_T25) const [pure virtual]

return steilheit

Implemented in Ah::BPT, and Ah::FET.

8.79.3.3 virtual Cplx Ah::Transistor::getS (const Voltage & *u*, Dbl *t* = PhysConst_T25) const [pure virtual]

return steilheit

Implemented in Ah::BPT, and Ah::FET.

The documentation for this class was generated from the following file:

- AH/Etech/Transistor.h

8.80 Ah::TransistorFollower Class Reference

represents a generic transistor follower

`#include <TransFollow.h>`

Public Member Functions

- TransistorFollower (Transistor &t, const Impedance &load)
  constructor
- ~TransistorFollower ()
  destructor
- Current getIload (const Voltage &Us)
  return current through load
- Voltage getUload (const Voltage &Us)
  return voltage at load

8.80.1 Detailed Description

represents a generic transistor follower

{ TransistorFollower} is an impedance buffer using a transistor in follower mode.

8.80.2 Constructor & Destructor Documentation

8.80.2.1 Ah::TransistorFollower::TransistorFollower (Transistor & *t*, const Impedance & *load*) [inline]

constructor

8.80.2.2 Ah::TransistorFollower::~TransistorFollower () [inline]

destructor

8.80.3 Member Function Documentation

8.80.3.1 Current Ah::TransistorFollower::getIload (const Voltage & *Us*)

return current through load

8.80.3.2 Voltage Ah::TransistorFollower::getUload (const Voltage & *Us*)

return voltage at load

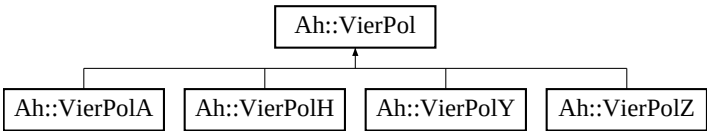
The documentation for this class was generated from the following file:

- AH/Etech/TransFollow.h

8.81 Ah::VierPol Class Reference

`#include <VierPol.h>`

Inheritance diagram for Ah::VierPol::



Public Member Functions

- Cplx det () const
  calculate and return determinante
- bool isValid () const
  return true if { VierPol} is valid

Protected Member Functions

- VierPol ()
  default constructor
- VierPol (Cplx C11, Cplx C12, Cplx C21, Cplx C22)
  constructor
- ~VierPol ()
  destructor
- bool equal (const VierPol &vp) const
  return true if equal

Protected Attributes

- Cplx c11
- Cplx c12
- Cplx c21
- Cplx c22

Friends

- std::ostream & operator<< (std::ostream &out, const VierPol &vp)
  overloaded operator for output into streams

8.81.1 Constructor & Destructor Documentation

8.81.1.1 Ah::VierPol::VierPol () [inline, protected]

default constructor

8.81.1.2 Ah::VierPol::VierPol (Cplx *C11*, Cplx *C12*, Cplx *C21*, Cplx *C22*) [inline, protected]

constructor

8.81.1.3 Ah::VierPol::~VierPol () [inline, protected]

destructor

8.81.2 Member Function Documentation

8.81.2.1 Cplx Ah::VierPol::det () const [inline]

calculate and return determinante

8.81.2.2 bool Ah::VierPol::equal (const VierPol & *vp*) const [inline, protected]

return true if equal

8.81.2.3 bool Ah::VierPol::isValid () const [inline]

return true if { VierPol} is valid

8.81.3 Friends And Related Function Documentation

8.81.3.1 std::ostream& operator<< (std::ostream & *out*, const VierPol & *vp*) [friend]

overloaded operator for output into streams

8.81.4 Member Data Documentation

8.81.4.1 Cplx Ah::VierPol::c11 [protected]

8.81.4.2 Cplx Ah::VierPol::c12 [protected]

8.81.4.3 Cplx Ah::VierPol::c21 [protected]

8.81.4.4 Cplx Ah::VierPol::c22 [protected]

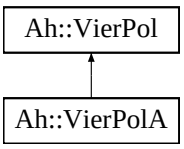
The documentation for this class was generated from the following file:

- AH/Etech/VierPol.h

8.82 Ah::VierPolA Class Reference

`#include <VierPol.h>`

Inheritance diagram for Ah::VierPolA::



Public Member Functions

- VierPolA (Cplx a11, Cplx a12, Cplx a21, Cplx a22)
  constructor
- VierPolA (const VierPolA &vp)
  copy constructor
- VierPolA (const VierPolY &vpy)
  convert constructor
- VierPolA (const VierPolH &vph)
  convert constructor
- VierPolA (const VierPolZ &vpz)
  convert constructor
- ~VierPolA ()
  destructor
- Cplx a11 () const
  accessors:
- Cplx a12 () const
- Cplx a21 () const
- Cplx a22 () const
- const VierPolA & operator= (const VierPolZ &vpz)
  convert VierPolZ into VierPolA
- const VierPolA & operator= (const VierPolH &vph)
  convert VierPolH into VierPolA
- const VierPolA & operator= (const VierPolY &vpy)
  convert VierPolY into VierPolA

Friends

- bool operator== (const VierPolA &vp1, const VierPolA &vp2)

  overloaded operator == for comparison of two { VierPolA }

- bool operator!= (const VierPolA &vp1, const VierPolA &vp2)

  overloaded operator != for comparison of two { VierPolA }

8.82.1 Constructor & Destructor Documentation

8.82.1.1 Ah::VierPolA::VierPolA (Cplx *a11*, Cplx *a12*, Cplx *a21*, Cplx *a22*) [inline]

constructor

8.82.1.2 Ah::VierPolA::VierPolA (const VierPolA & *vp*) [inline]

copy constructor

8.82.1.3 Ah::VierPolA::VierPolA (const VierPolY & *vpy*)

convert constructor

8.82.1.4 Ah::VierPolA::VierPolA (const VierPolH & *vph*)

convert constructor

8.82.1.5 Ah::VierPolA::VierPolA (const VierPolZ & *vpz*)

convert constructor

8.82.1.6 Ah::VierPolA::~VierPolA () [inline]

destructor

8.82.2 Member Function Documentation

8.82.2.1 Cplx Ah::VierPolA::a11 () const [inline]

accessors:

8.82.2.2 Cplx Ah::VierPolA::a12 () const [inline]

8.82.2.3 Cplx Ah::VierPolA::a21 () const [inline]

8.82.2.4 Cplx Ah::VierPolA::a22 () const [inline]

8.82.2.5 const VierPolA& Ah::VierPolA::operator= (const VierPolY & *vpy*)

convert VierPolY into VierPolA

8.82.2.6 const VierPolA& Ah::VierPolA::operator= (const VierPolH & *vph*)

convert VierPolH into VierPolA

8.82.2.7 const VierPolA& Ah::VierPolA::operator= (const VierPolZ & *vpz*)

convert VierPolZ into VierPolA

8.82.3 Friends And Related Function Documentation

8.82.3.1 bool operator!= (const VierPolA & *vp1*, const VierPolA & *vp2*) [friend]

overloaded operator != for comparison of two { VierPolA}

8.82.3.2 bool operator== (const VierPolA & *vp1*, const VierPolA & *vp2*) [friend]

overloaded operator == for comparison of two { VierPolA}

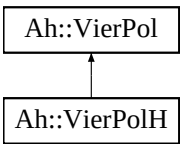
The documentation for this class was generated from the following file:

- AH/Etech/VierPol.h

8.83 Ah::VierPolH Class Reference

`#include <VierPol.h>`

Inheritance diagram for Ah::VierPolH::



Public Member Functions

- VierPolH (Cplx h11, Cplx h12, Cplx h21, Cplx h22)
  constructor
- VierPolH (const VierPolH &vp)
  copy constructor
- VierPolH (const VierPolY &vpy)
  convert constructor
- VierPolH (const VierPolZ &vpz)
  convert constructor
- VierPolH (const VierPolA &vpa)
  convert constructor
- ~VierPolH ()
  destructor
- Cplx h11 () const
  accessors:
- Cplx h12 () const
- Cplx h21 () const
- Cplx h22 () const
- const VierPolH & operator= (const VierPolZ &vpz)
  convert VierPolZ into VierPolH
- const VierPolH & operator= (const VierPolY &vpy)
  convert VierPolY into VierPolH
- const VierPolH & operator= (const VierPolA &vpa)
  convert VierPolA into VierPolH

Friends

- bool operator== (const VierPolH &vp1, const VierPolH &vp2)

  overloaded operator == for comparison of two { VierPolH}

- bool operator!= (const VierPolH &vp1, const VierPolH &vp2)

  overloaded operator != for comparison of two { VierPolH}

8.83.1 Constructor & Destructor Documentation

8.83.1.1 Ah::VierPolH::VierPolH (Cplx *h11*, Cplx *h12*, Cplx *h21*, Cplx *h22*) [inline]

constructor

8.83.1.2 Ah::VierPolH::VierPolH (const VierPolH & *vp*) [inline]

copy constructor

8.83.1.3 Ah::VierPolH::VierPolH (const VierPolY & *vpy*)

convert constructor

8.83.1.4 Ah::VierPolH::VierPolH (const VierPolZ & *vpz*)

convert constructor

8.83.1.5 Ah::VierPolH::VierPolH (const VierPolA & *vpa*)

convert constructor

8.83.1.6 Ah::VierPolH::~VierPolH () [inline]

destructor

8.83.2 Member Function Documentation

8.83.2.1 Cplx Ah::VierPolH::h11 () const [inline]

accessors:

8.83.2.2 Cplx Ah::VierPolH::h12 () const [inline]

8.83.2.3 Cplx Ah::VierPolH::h21 () const [inline]

8.83.2.4 Cplx Ah::VierPolH::h22 () const [inline]

8.83.2.5 const VierPolH& Ah::VierPolH::operator= (const VierPolA & *vpa*)

convert VierPolA into VierPolH

8.83.2.6 const VierPolH& Ah::VierPolH::operator= (const VierPolY & *vpy*)

convert VierPolY into VierPolH

8.83.2.7 const VierPolH& Ah::VierPolH::operator= (const VierPolZ & *vpz*)

convert VierPolZ into VierPolH

8.83.3 Friends And Related Function Documentation

8.83.3.1 bool operator!= (const VierPolH & *vp1*, const VierPolH & *vp2*) [friend]

overloaded operator != for comparison of two { VierPolH}

8.83.3.2 bool operator== (const VierPolH & *vp1*, const VierPolH & *vp2*) [friend]

overloaded operator == for comparison of two { VierPolH}

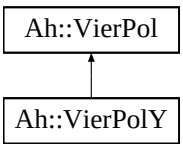
The documentation for this class was generated from the following file:

- AH/Etech/VierPol.h

8.84 Ah::VierPolY Class Reference

`#include <VierPol.h>`

Inheritance diagram for Ah::VierPolY::



Public Member Functions

- VierPolY (Cplx y11, Cplx y12, Cplx y21, Cplx y22)
  constructor
- VierPolY (const VierPolY &vp)
  copy constructor
- VierPolY (const VierPolZ &vpz)
  convert constructor
- VierPolY (const VierPolH &vph)
  convert constructor
- VierPolY (const VierPolA &vpa)
  convert constructor
- ~VierPolY ()
  destructor
- Cplx y11 () const
  accessors:
- Cplx y12 () const
- Cplx y21 () const
- Cplx y22 () const
- const VierPolY & operator= (const VierPolZ &vpz)
  convert VierPolZ into VierPolY
- const VierPolY & operator= (const VierPolH &vph)
  convert VierPolH into VierPolY
- const VierPolY & operator= (const VierPolA &vpa)
  convert VierPolA into VierPolY

Friends

- bool operator== (const VierPolY &vp1, const VierPolY &vp2)

  overloaded operator == for comparison of two { VierPolY}

- bool operator!= (const VierPolY &vp1, const VierPolY &vp2)

  overloaded operator != for comparison of two { VierPolY}

8.84.1 Constructor & Destructor Documentation

8.84.1.1 Ah::VierPolY::VierPolY (Cplx *y11*, Cplx *y12*, Cplx *y21*, Cplx *y22*) [inline]

constructor

8.84.1.2 Ah::VierPolY::VierPolY (const VierPolY & *vp*) [inline]

copy constructor

8.84.1.3 Ah::VierPolY::VierPolY (const VierPolZ & *vpz*)

convert constructor

8.84.1.4 Ah::VierPolY::VierPolY (const VierPolH & *vph*)

convert constructor

8.84.1.5 Ah::VierPolY::VierPolY (const VierPolA & *vpa*)

convert constructor

8.84.1.6 Ah::VierPolY::~VierPolY () [inline]

destructor

8.84.2 Member Function Documentation

8.84.2.1 const VierPolY& Ah::VierPolY::operator= (const VierPolA & *vpa*)

convert VierPolA into VierPolY

8.84.2.2 const VierPolY& Ah::VierPolY::operator= (const VierPolH & *vph*)

convert VierPolH into VierPolY

8.84.2.3 const VierPolY& Ah::VierPolY::operator= (const VierPolZ & *vpz*)

convert VierPolZ into VierPolY

8.84.2.4 Cplx Ah::VierPolY::y11 () const [inline]

accessors:

8.84.2.5 Cplx Ah::VierPolY::y12 () const [inline]

8.84.2.6 Cplx Ah::VierPolY::y21 () const [inline]

8.84.2.7 Cplx Ah::VierPolY::y22 () const [inline]

8.84.3 Friends And Related Function Documentation

8.84.3.1 bool operator!= (const VierPolY & *vp1*, const VierPolY & *vp2*) [friend]

overloaded operator != for comparison of two { VierPolY }

8.84.3.2 bool operator== (const VierPolY & *vp1*, const VierPolY & *vp2*) [friend]

overloaded operator == for comparison of two { VierPolY }

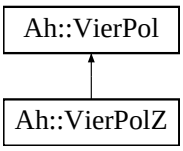
The documentation for this class was generated from the following file:

- AH/Etech/VierPol.h

8.85 Ah::VierPolZ Class Reference

`#include <VierPol.h>`

Inheritance diagram for Ah::VierPolZ::



Public Member Functions

- VierPolZ (Cplx z11, Cplx z12, Cplx z21, Cplx z22)
  constructor
- VierPolZ (const VierPolZ &vp)
  copy constructor
- VierPolZ (const VierPolY &vpy)
  convert constructor
- VierPolZ (const VierPolH &vph)
  convert constructor
- VierPolZ (const VierPolA &vpa)
  convert constructor
- ~VierPolZ ()
  destructor
- Cplx z11 () const
  accessors:
- Cplx z12 () const
- Cplx z21 () const
- Cplx z22 () const
- const VierPolZ & operator= (const VierPolY &vpy)
  convert VierPolY into VierPolZ
- const VierPolZ & operator= (const VierPolH &vph)
  convert VierPolH into VierPolZ
- const VierPolZ & operator= (const VierPolA &vpa)
  convert VierPolA into VierPolZ

Friends

- bool operator== (const VierPolZ &vp1, const VierPolZ &vp2)

  overloaded operator == for comparison of two { VierPolZ}

- bool operator!= (const VierPolZ &vp1, const VierPolZ &vp2)

  overloaded operator != for comparison of two { VierPolZ}

8.85.1 Constructor & Destructor Documentation

8.85.1.1 Ah::VierPolZ::VierPolZ (Cplx *z11*, Cplx *z12*, Cplx *z21*, Cplx *z22*) [inline]

constructor

8.85.1.2 Ah::VierPolZ::VierPolZ (const VierPolZ & *vp*) [inline]

copy constructor

8.85.1.3 Ah::VierPolZ::VierPolZ (const VierPolY & *vpy*)

convert constructor

8.85.1.4 Ah::VierPolZ::VierPolZ (const VierPolH & *vph*)

convert constructor

8.85.1.5 Ah::VierPolZ::VierPolZ (const VierPolA & *vpa*)

convert constructor

8.85.1.6 Ah::VierPolZ::~VierPolZ () [inline]

destructor

8.85.2 Member Function Documentation

8.85.2.1 const VierPolZ& Ah::VierPolZ::operator= (const VierPolA & *vpa*)

convert VierPolA into VierPolZ

8.85.2.2 const VierPolZ& Ah::VierPolZ::operator= (const VierPolH & *vph*)

convert VierPolH into VierPolZ

8.85.2.3 const VierPolZ& Ah::VierPolZ::operator= (const VierPolY & *vpy*)

convert VierPolY into VierPolZ

8.85.2.4 Cplx Ah::VierPolZ::z11 () const [inline]

accessors:

8.85.2.5 Cplx Ah::VierPolZ::z12 () const [inline]

8.85.2.6 Cplx Ah::VierPolZ::z21 () const [inline]

8.85.2.7 Cplx Ah::VierPolZ::z22 () const [inline]

8.85.3 Friends And Related Function Documentation

8.85.3.1 bool operator!= (const VierPolZ & *vp1*, const VierPolZ & *vp2*) [friend]

overloaded operator != for comparison of two { VierPolZ}

8.85.3.2 bool operator== (const VierPolZ & *vp1*, const VierPolZ & *vp2*) [friend]

overloaded operator == for comparison of two { VierPolZ}

The documentation for this class was generated from the following file:

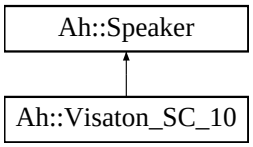
- AH/Etech/VierPol.h

8.86 Ah::Visaton_SC_10 Class Reference

represents the speaker VISATON SC 10

`#include <VisatonSpeakers.h>`

Inheritance diagram for Ah::Visaton_SC_10::



Public Member Functions

- Visaton_SC_10 ()
  default constructor
- virtual ~Visaton_SC_10 ()
  destructor
- virtual Dbl getSpl (Dbl freq) const
  get acoustic power level dB/W/m at specified frequency

8.86.1 Detailed Description

represents the speaker VISATON SC 10

{ Visaton} represents the 25 mm dome tweeter SC 10 which is made by Visaton.

8.86.2 Constructor & Destructor Documentation

8.86.2.1 Ah::Visaton_SC_10::Visaton_SC_10 ()

default constructor

8.86.2.2 virtual Ah::Visaton_SC_10::~Visaton_SC_10 () `[inline, virtual]`

destructor

8.86.3 Member Function Documentation

8.86.3.1 virtual Dbl Ah::Visaton_SC_10::getSpl (Dbl *freq*) const `[virtual]`

get acoustic power level dB/W/m at specified frequency

Reimplemented from Ah::Speaker.

The documentation for this class was generated from the following file:

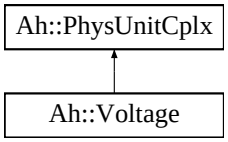
- AH/Etech/VisatonSpeakers.h

8.87 Ah::Voltage Class Reference

represents an electrical voltage

`#include <Voltage.h>`

Inheritance diagram for Ah::Voltage::



Public Member Functions

- Voltage (Dbl r=0.0, Dbl i=0.0)
  constructor
- Voltage (const Cplx &val)
  constructor
- Voltage (const Voltage &u)
  copy constructor

Friends

- Voltage operator+ (const Voltage &u1, const Voltage &u2)
  overloaded operator + for addition of two voltages
- Voltage operator- (const Voltage &u1, const Voltage &u2)
  overloaded operator - for subtraction of two voltages
- Voltage operator * (const Voltage &u1, const Cplx &k)
  *overloaded operator * for multiplication of { Voltage} * { Cplx}*
- Voltage operator * (const Cplx &k, const Voltage &u1)
  *overloaded operator * for multiplication of { Cplx} * { Voltage}*
- Voltage operator/ (const Voltage &u1, const Cplx &k)
  overloaded operator / for division of { Voltage} / { Cplx}
- bool operator== (const Voltage &u1, const Voltage &u2)
  overloaded operator == for comparison of two Voltages
- bool operator!= (const Voltage &u1, const Voltage &u2)
  overloaded operator != for comparison of two Voltages
- bool operator< (const Voltage &u1, const Voltage &u2)

overloaded operator < for comparison of two Voltages

- bool operator> (const Voltage &u1, const Voltage &u2)
  overloaded operator > for comparison of two Voltages

8.87.1 Detailed Description

represents an electrical voltage

{ Voltage} represents an electrical voltage which can be used both in DC (direct current) and in AC (alternate current) applications.

8.87.2 Constructor & Destructor Documentation

8.87.2.1 Ah::Voltage::Voltage (Dbl *r* = 0.0, Dbl *i* = 0.0) [inline]

constructor

8.87.2.2 Ah::Voltage::Voltage (const Cplx & *val*) [inline]

constructor

8.87.2.3 Ah::Voltage::Voltage (const Voltage & *u*) [inline]

copy constructor

8.87.3 Friends And Related Function Documentation

8.87.3.1 Voltage operator * (const Cplx & *k*, const Voltage & *u1*) [friend]

overloaded operator * for multiplication of { Cplx} * { Voltage}

8.87.3.2 Voltage operator * (const Voltage & *u1*, const Cplx & *k*) [friend]

overloaded operator * for multiplication of { Voltage} * { Cplx}

8.87.3.3 bool operator!= (const Voltage & *u1*, const Voltage & *u2*) [friend]

overloaded operator != for comparison of two Voltages

8.87.3.4 Voltage operator+ (const Voltage & *u1*, const Voltage & *u2*) [friend]

overloaded operator + for addition of two voltages

8.87.3.5 Voltage operator- (const Voltage & *u1*, const Voltage & *u2*) [friend]

overloaded operator - for subtraction of two voltages

8.87.3.6 Voltage operator/ (const Voltage & *u1*, const Cplx & *k*) [friend]

overloaded operator / for division of { Voltage} / { Cplx}

8.87.3.7 bool operator< (const Voltage & *u1*, const Voltage & *u2*) [friend]

overloaded operator < for comparison of two Voltages

8.87.3.8 bool operator== (const Voltage & *u1*, const Voltage & *u2*) [friend]

overloaded operator == for comparison of two Voltages

8.87.3.9 bool operator> (const Voltage & *u1*, const Voltage & *u2*) [friend]

overloaded operator > for comparison of two Voltages

The documentation for this class was generated from the following file:

- AH/Etech/Voltage.h

Chapter 9

libAHetech File Documentation

9.1 AH/Etech/aaa.h File Reference

```
#include <AH/Config/Platform.h>
#include <complex>
```

Namespaces

- namespace Ah
- namespace AH

Classes

- class Ah::Cplx

  declaration of a complex number

Typedefs

- typedef double Ah::Dbl

  declaration of a scalar number

9.2 AH/Etech/Algo.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/Voltage.h>
#include <AH/Etech/Current.h>
#include <AH/Etech/Power.h>
#include <AH/Etech/Impedance.h>
```

Namespaces

- namespace Ah

Functions

- Impedance Ah::operator/ (const Voltage &u, const Current &i)
  overloaded operator / for division of { Voltage} / { Current}
- Voltage Ah::operator * (const Impedance &r, const Current &i)
  *overloaded operator * for multiplication of { Impedance} * { Current}*
- Voltage Ah::operator * (const Current &i, const Impedance &r)
  *overloaded operator * for multiplication of { Current} * { Impedance}*
- Voltage Ah::operator/ (const Power &p, const Current &i)
  overloaded operator / for division of { Power} / { Current}
- Current Ah::operator/ (const Voltage &u, const Impedance &r)
  overloaded operator / for division of { Voltage} / { Impedance}
- Current Ah::operator * (const Power &p, const Voltage &u)
  overloaded operator / for division of { Power} / { Voltage}
- Power Ah::operator * (const Voltage &u, const Current &i)
  *overloaded operator * for multiplication of { Voltage} * { Current}*
- Power Ah::operator * (const Current &i, const Voltage &u)
  *overloaded operator * for multiplication of { Current} * { Voltage}*
- Dbl Ah::inVdB (Dbl x)
  return value in voltage decibel
- Dbl Ah::inPdB (Dbl x)
  return value in power decibel
- Dbl Ah::inDeg (Dbl x)
  return phase argument in degree

9.3 AH/Etech/Amplifier.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/Types.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::Amplifier

  pure virtual generic amplifier base class

9.4 AH/Etech/AnalogDevOpAmps.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/OpAmp.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::AD711

  represents the operational amplifier AD711

- class Ah::AD745

  represents the ultra low noise operational amplifier AD745

- class Ah::AD797

  represents the ultra low noise operational amplifier AD797

- class Ah::AD845

  represents the fast precision operational amplifier AD845

9.5 AH/Etech/AnalogDevOpCreat.h File Reference

```
#include <AH/Config/Platform.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::AnalogDevOpAmpCreator

  represents the creator class for Analog Devices operational amplifiers

9.6 AH/Etech/Box.h File Reference

```
#include <AH/Config/Platform.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::Box

  represents a loudspeaker box

9.7 AH/Etech/BPT.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/Transistor.h>
#include <AH/Etech/Voltage.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::BPT

  represents a bipolar transistor

9.8 AH/Etech/BurrBrownOpAmps.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/OpAmp.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::OPA134

  represents the Sound-Plus operational amplifier OPA134

- class Ah::OPA604

  represents the audio operational amplifier OPA604

9.9 AH/Etech/BurrBrownOpCreat.h File Reference

```
#include <AH/Config/Platform.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::BurrBrownOpAmpCreator

  represents the creator class for Burr-Brown operational amplifiers

9.10 AH/Etech/Capacitor.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/FreqImp.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::Capacitor

  represents an ideal electrical capacitor

9.11 AH/Etech/Cd.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/Types.h>
```

Namespaces

- namespace Ah

Functions

- Cplx Ah::CdPreEmphasis (Dbl f)

  return CD preemphasis value at frequency { f}

- Cplx Ah::CdDeEmphasis (Dbl f)

  return CD deemphasis value at frequency { f}

9.12 AH/Etech/ClosedBox.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/Types.h>
#include <AH/Etech/Box.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::ClosedBox

  represents a closed loudseaker box

9.13 AH/Etech/Current.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/PhysUnit.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::Current

  represents an electrical current

9.14 AH/Etech/Divider.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/Impedance.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::Divider

  represents a voltage divider

9.15 AH/Etech/Etech.h File Reference

```
#include <AH/Etech/Voltage.h>
#include <AH/Etech/Current.h>
#include <AH/Etech/Power.h>
#include <AH/Etech/Impedance.h>
#include <AH/Etech/Algo.h>
#include <AH/Etech/Resistor.h>
#include <AH/Etech/Capacitor.h>
#include <AH/Etech/Inductor.h>
```

9.16 AH/Etech/FET.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/Transistor.h>
#include <AH/Etech/Voltage.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::FET

  represents a FET

9.17 AH/Etech/Filter2PoleInv.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/OpAmp.h>
#include <AH/Etech/Amplifier.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::Filter2PoleInv

  2-pole filter using multiple feedback on inverting amplifier

9.18 AH/Etech/FreqImp.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/Impedance.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::FreqImpedance

  represents an frequency dependent electrical impedance base class

9.19 AH/Etech/Impedance.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/PhysUnit.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::Impedance

  represents an electrical impedance

9.20 AH/Etech/Inductor.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/FreqImp.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::Inductor

  represents an ideal electrical inductor

9.21 AH/Etech/IntPol.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/Types.h>
#include <vector>
```

Namespaces

- namespace Ah

Classes

- struct Ah::IntPolData
- class Ah::IntPol

  represents a pure virtual interpolation class

- class Ah::IntPolLin1Lin2

  represents a linear interpolation class

- class Ah::IntPolLog1Lin2

  represents a logarithmic interpolation class

9.22 AH/Etech/InvAmp.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/Amplifier.h>
#include <AH/Etech/OpAmp.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::InvAmp

  represents an inverting amplifier

9.23 AH/Etech/KefSpeakers.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/Speaker.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::Kef_B110_A
  represents the speaker KEF B 110 SP 1003
- class Ah::Kef_B110_B
  represents the speaker KEF B 110 SP 1057
- class Ah::Kef_B200_A
  represents the speaker KEF B 200 SP 1014
- class Ah::Kef_B200_B
  represents the speaker KEF B 200 SP 1039
- class Ah::Kef_B139_B
  represents the speaker KEF B 139 SP 1044
- class Ah::Kef_B300_B
  represents the speaker KEF B 300 SP 1071

9.24 AH/Etech/LinTechOpAmps.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/OpAmp.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::LT1028

  represents the very fast high precision operational amplifier LT1028

- class Ah::LT1115

  represents the audio operational amplifier LT1115

9.25 AH/Etech/LinTechOpCreat.h File Reference

```
#include <AH/Config/Platform.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::LinTechOpAmpCreator

  represents the creator class for Linear Technology operational amplifiers

9.26 AH/Etech/MathConst.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/Types.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::MathConst

  represents some mathical constants

Defines

- #define MathConst_PI 3.14159265359

9.26.1 Define Documentation

9.26.1.1 #define MathConst_PI 3.14159265359

9.27 AH/Etech/MiscOpAmps.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/OpAmp.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::LM833

  represents the audio operational amplifier LM833

- class Ah::NE5532

  represents the audio operational amplifier NE5532

- class Ah::OP07

  represents the industry standard precision operational amplifier OP07

- class Ah::OP27

  represents the fast industry standard precision operational amplifier OP27

- class Ah::OP37

  represents the very fast industry standard precision operational amplifier OP37

- class Ah::OP77

  represents the industry standard high precision operational amplifier OP77

- class Ah::OP177

  represents the industry standard high precision operational amplifier OP177

9.28 AH/Etech/MiscOpCreat.h File Reference

```
#include <AH/Config/Platform.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::MiscOpAmpCreator

  represents the OpAmp creator class

9.29 AH/Etech/MonacorSpeakers.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/Speaker.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::Monacor_SP45_4
  represents the speaker Monacor SP-45/4
- class Ah::Monacor_SP45_8
  represents the speaker Monacor SP-45/8
- class Ah::Monacor_SP60_4
  represents the speaker Monacor SP-60/4
- class Ah::Monacor_SP60_8
  represents the speaker Monacor SP-60/8
- class Ah::Monacor_SPP110_4
  represents the speaker Monacor SPP-110/4
- class Ah::Monacor_SPP110_8
  represents the speaker Monacor SPP-110/8

9.30 AH/Etech/NoneInvAmp.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/Amplifier.h>
#include <AH/Etech/OpAmp.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::NoneInvAmp

  represents a none inverting amplifier

9.31 AH/Etech/OpAmp.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/Impedance.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::OpAmp

  represents an operational amplifier

9.32 AH/Etech/OpAmpCreator.h File Reference

```
#include <AH/Config/Platform.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::OpAmpCreator

  represents the OpAmp creator class

9.33 AH/Etech/PhysConst.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/Types.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::PhysConst

  represents some physical constants

Defines

- #define PhysConst_T25 298.13
- #define PhysConst_BOLTZMANN 1.381e-23
- #define PhysConst_EPS0 1.6e-19

9.33.1 Define Documentation

9.33.1.1 #define PhysConst_BOLTZMANN 1.381e-23

9.33.1.2 #define PhysConst_EPS0 1.6e-19

9.33.1.3 #define PhysConst_T25 298.13

9.34 AH/Etech/PhysUnit.h File Reference

```
#include <AH/Config/Platform.h>
#include <cmath>
#include <AH/Etech/Types.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::PhysUnitDbl
  represents a scalar physical unit
- class Ah::PhysUnitCplx
  represents a complex physical unit

9.35 AH/Etech/PickUp.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/Impedance.h>
#include <AH/Etech/Resistor.h>
#include <AH/Etech/Capacitor.h>
#include <AH/Etech/Inductor.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::PickUp

  represents a pickup of a record player

- class Ah::PickUpOrtofon540mk2

  Ortofon 540 MK2 (example supplied by Frank Klemm in drmh).

- class Ah::PickUpVdhDDT2Special

  Van den Hul DDT II Special (data supplied by Frank Klemm).

- class Ah::PickUpVdhFrogCopper

  Van den Hul Frog Copper (data supplied by Frank Klemm).

- class Ah::PickUpVdhBlackBeautySPX

  Van den Hul Black Beauty SPX (data supplied by Frank Klemm).

- class Ah::PickUpVdhColibriXGP

  Van den Hul The Colibri XGP (data supplied by Frank Klemm).

- class Ah::PickUpClearaudioAlphaWood

  Clearaudio Alpha Wood (data supplied by Frank Klemm).

- class Ah::PickUpClearaudioVirtuosoWood

  Clearaudio Virtuoso Wood (data supplied by Frank Klemm).

- class Ah::PickUpClearaudioGammaSGold

  Clearaudio Gamma S Gold (data supplied by Frank Klemm).

- class Ah::PickUpClearaudioDiscovery

  Clearaudio Discovery (data supplied by Frank Klemm).

- class Ah::PickUpGradoPlatinum

  Grado Platinum (data supplied by Frank Klemm).

- class Ah::PickUpGradoMaster

  Grado Master (data supplied by Frank Klemm).

- class Ah::PickUpGradoReference

  Grado Reference (data supplied by Frank Klemm).

- class Ah::PickUpGradoStatement

  Grado The Statement (data supplied by Frank Klemm).

9.36 AH/Etech/Power.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/PhysUnit.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::Power

  represents an electrical power

9.37 AH/Etech/Resistor.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/Impedance.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::Resistor

  represents an ideal electrical resistor

9.38 AH/Etech/Riaa.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/Types.h>
```

Namespaces

- namespace Ah

Functions

- Cplx Ah::RiaaPreEmphasis (Dbl f)

  return RIAA preemphasis value at frequency { f}

- Cplx Ah::RiaaDeEmphasis (Dbl f)

  return RIAA deemphasis value at frequency { f}

9.39 AH/Etech/SalKey.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/Impedance.h>
#include <AH/Etech/OpAmp.h>
#include <AH/Etech/Amplifier.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::SalKey
  Sallen-Key Filter.

9.40 AH/Etech/Speaker.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/Types.h>
#include <AH/Etech/Impedance.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::Speaker

  represents a pure speaker system

9.41 AH/Etech/SpeakerCreator.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/Speaker.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::SpeakerCreator

  represents the speaker creator class

9.42 AH/Etech/TransFollow.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/Voltage.h>
#include <AH/Etech/Current.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::TransistorFollower

  represents a generic transistor follower

9.43 AH/Etech/Transistor.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/PhysConst.h>
#include <AH/Etech/Current.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::Transistor

  represents a generic transistor

9.44 AH/Etech/Types.h File Reference

```
#include <AH/Config/Platform.h>
#include <complex>
```

Namespaces

- namespace Ah

Classes

- class Ah::Cplx

  declaration of a complex number

Typedefs

- typedef std::complex< double > Ah::double_complex

9.45 AH/Etech/VdHPickUps.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/PickUp.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::PickUpVdhMc1Special
  Van den Hul MC-1 Special.
- class Ah::PickUpVdhMm1
  Van den Hul MM-1.

9.46 AH/Etech/Version.h File Reference

Defines

- #define AH_ETECH_VERSION "1.0"

9.46.1 Define Documentation

9.46.1.1 #define AH_ETECH_VERSION "1.0"

9.47 AH/Etech/VierPol.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/Types.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::VierPol
- class Ah::VierPolZ
- class Ah::VierPolY
- class Ah::VierPolH
- class Ah::VierPolA

9.48 AH/Etech/VisatonSpeakers.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/Speaker.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::Visaton_SC_10

  represents the speaker VISATON SC 10

9.49 AH/Etech/Voltage.h File Reference

```
#include <AH/Config/Platform.h>
#include <AH/Etech/PhysUnit.h>
```

Namespaces

- namespace Ah

Classes

- class Ah::Voltage

  represents an electrical voltage

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