Package: Fiscal (via r-universe)

October 26, 2026

Type Package

Title Income Tax Calculations (UK)

Version 1.0.2

Date 2026-03-31

Description Income tax calculations for England, Northern Ireland and Wales. Estimate annual income tax within the different taxation bands at specified levels of both taxable income and the Personal Allowance, emulating the results obtained at <https://www.gov.uk/estimate-income-tax>. Calculate the standard Personal Allowance at various levels of taxable income. Estimate the personal allowance required to recoup a specified amount of income tax.

License MIT + file LICENSE

Encoding UTF-8

Depends R (>= 4.2.0)

Repository https://mark-eis.r-universe.dev

Date/Publication 2026-03-31 15:04:57 UTC

RemoteUrl https://github.com/mark-eis/fiscal

RemoteRef HEAD

RemoteSha b1c9288c80b0481c530c68b28dba316d83a2c55f

Contents

Fiscal-package 2
allowance 3
incometax 5
pers_allow 7
tax_opts 9

Index **11**

`Fiscal-package` *Income Tax Calculations (UK)*

Description

Income tax calculations for England, Northern Ireland and Wales. Estimate annual income tax within the different taxation bands at specified levels of both taxable income and the Personal Allowance, emulating the results obtained at <https://www.gov.uk/estimate-income-tax>. Calculate the standard Personal Allowance at various levels of taxable income. Estimate the personal allowance required to recoup a specified amount of income tax.

Details

For one of life's only two certainties—for the other, the **survival** package may be helpful.

Package Source

Source code on GitHub.

Disclaimer

While every effort is made to ensure this package functions as expected, the author accepts no responsibility for the consequences of errors.

Documentation Index

Index: This package was not yet installed at build time.

Author(s)

Mark Eisler [aut, cre, cph] (ORCID: <https://orcid.org/0000-0001-6843-3345>)

Maintainer: Mark Eisler <mark@markeisler.com>

References

GOV.UK: –

Estimate your Income Tax for the current year

Income Tax rates and allowances for current and previous tax years

Examples

```
## Calculate income tax for a range of salaries
incometax(12500)

incometax(25000)

incometax(75000)
```

```
incometax(125000)

incometax(150000)
```

`allowance` *Personal tax allowance adjusted to recoup a tax deficit*

Description

Calculates the personal tax allowance adjusted in order to recoup a given amount of tax.

Usage

```
allowance(taxable, deficit = NULL, round10 = TRUE, opts = tax_opts())
```

Arguments

`taxable`	`numeric`, annual taxable income.
`deficit`	`numeric`, tax deficit to recoup, see details.
`round10`	`logical`, whether or not to round down return value to nearest £10; default `TRUE`.
`opts`	options, as created by `tax_opts()`, see details.

Details

Income tax deficits are recouped by adjusting the Personal Allowance. `allowance()` calculates the personal allowance required to recoup a specified amount of tax over the course of a year for a given taxable income. The allowance calculated can be a negative amount, in which case it may be referred to as a *pay adjustment*.

Argument `deficit` represents the total amount of tax to recoup, including the usual amount of income tax as calculated by `incometax(taxable)`, plus the additional outstanding tax deficit. If `round10 = TRUE`, as by default, the return value will be rounded down to the nearest £10, in keeping with GOV.UK tax codes. Rounding down ensures that, if anything, the required tax is very slightly overestimated and not underestimated. Argument `opts` specifying values for tax bands, rates and allowances must be provided using `tax_opts()`, which by default gives GOV.UK values for 2025-2027 tax years.

Value

A `numeric`, representing value of the Personal Allowance or if negative, pay adjustment, required to recoup the tax deficit.

Author(s)

Mark Eisler [aut, cre, cph] (ORCID: <https://orcid.org/0000-0001-6843-3345>)

References

GOV.UK: –

- Personal Allowance
- K code pay adjustment

See Also

Other income_tax: `incometax()`, `pers_allow()`, `tax_opts()`

Vignette: PAYE income tax calculator for England, Northern Ireland and Wales.

Examples

```
###
## Personal Allowance to recoup a given tax deficit

## An annual income of £13,579 i.e., £1,009 above the £12,570
## standard Personal Allowance, usually attracts £200 total income tax: -
incometax(13579)

## At this income, the Personal Allowance required
## to recoup an additional £600 tax deficit is: -
allowance(13579, 200 + 600)

## As intended using this allowance, a total of at least £800 income tax
## is recouped i.e., an additional amount of at least £600 -
incometax(13579, 9570)

###
## Pay Adjustment to recoup a given tax deficit

## An annual income of £112,570, at which the standard Personal Allowance
## decreases by half to £6,285, usually attracts £34,970.4 total income tax: -
incometax(112570)

## At this income, the pay adjustment required
## to recoup an additional £3,500 tax deficit is: -
allowance(112570, 34970.4 + 3500)

## Using this pay adjustment, taxable income is adjusted to £115,030 and
## as intended, a total of at least £38,472 income tax is recouped
## i.e., an additional amount of at least £3,500: -
incometax(112570, -2460)

## Not run:
###
## For further examples, see: -
 vignette("incometax")

## End(Not run)
```

`incometax` *Income tax calculator*

Description

PAYE income tax calculator for England, Northern Ireland and Wales.

Usage

```
incometax(income, allowance = NULL, opts = tax_opts())

## S3 method for class 'incometax'
format(x, ...)

## S3 method for class 'incometax'
print(x, ...)
```

Arguments

`income`	`numeric`, annual taxable income.
`allowance`	`numeric`, Personal Allowance or pay adjustment; see Details.
`opts`	options, as created by `tax_opts()`, see Details.
`x`	object of class `"incometax"` created by function `incometax()`.
`...`	further arguments passed to or from other methods.

Details

`incometax()` estimates income tax payable on PAYE income in England, Northern Ireland and Wales, and is intended to replicate the estimates of GOV.UK Estimate your Income Tax for the current year.

Tax is paid on the amount of taxable income remaining after the Personal Allowance has been deducted, and is allocated among the *basic*, *higher* and *additional* rates. After deduction of the Personal Allowance, if any (see below): income up to and including the upper limit of the basic rate band attracts *basic rate* tax; income exceeding the basic rate band by an amount up to and including the upper limit of the higher rate band attracts *higher rate* tax; and income exceeding the sum of the basic and higher rate bands attracts *additional rate* tax.

The standard Personal Allowance is the amount of annual taxable income on which there is no tax liability, currently £12,570. The Personal Allowance goes down by £1 for every £2 that adjusted net income is above an upper threshold, currently £100,000. This means the Personal Allowance is zero if annual taxable income is £125,140 or above.

Hence currently in 2026: –

- annual taxable income after allowances—e.g., the standard Personal Allowance of £12,570—up to £37,700 attracts 20% basic rate income tax;

- annual taxable income after allowances between £37,701 and £125,139 attracts 40% higher rate income tax—noting that the standard Personal Allowance is reduced above £100,000;
- annual taxable income after allowances above £125,139 attracts 45% additional rate income tax—noting there is no standard Personal Allowance at or above £125,140.

See GOV.UK Income Tax rates and allowances for current and previous tax years: Tax rates and bands.

Argument `allowance` may be used to specify a bespoke Personal Allowance, or if negative, a K code pay adjustment; otherwise, its default value will be calculated using `pers_allow(income, opts)`. Argument `opts` specifying values for tax bands, rates and allowances must be provided using `tax_opts()`, which by default gives GOV.UK values for 2025-2027 tax years.

`print()` and `format()` methods are provided for class `"incometax"`, see Value.

Value

`incometax()` returns an object of class `"incometax"` comprising a named `numeric` vector of length three, with names derived from the three tax rates provided using `tax_opts()` i.e., `20%`, `40%` and `45%` for the 2025-2027 tax years; and `numeric` attributes `"allowance"` and `"taxable"`, representing the personal allowance and tableable pay respectively.

Note

1. In practice, an additional £9 annual income is allowed before basic and higher rate tax are applied.
2. An additional £6 annual income is allowed before additional rate tax is applied; the additional £6 is decreased by £1 for every further £2 increase in income beyond £125,146.
3. `incometax()` does not currently calculate *National Insurance* (NI) contributions, and should therefore return values equal to the estimates from the GOV.UK website (Estimate your Income Tax for the current year) with "yes" as the answer to the question 'Are you over the State Pension age?' For NI information see: Rates and allowances: National Insurance contributions.

Author(s)

Mark Eisler [aut, cre, cph] (ORCID: <https://orcid.org/0000-0001-6843-3345>)

References

GOV.UK: –

- Estimate your Income Tax for the current year
- Personal Allowance
- Tax codes

See Also

Other income_tax: `allowance()`, `pers_allow()`, `tax_opts()`

Vignette: PAYE income tax calculator for England, Northern Ireland and Wales.

Examples

```
## Up to the standard Personal Allowance,
## income attracts no tax
incometax(12570)

## After the standard Personal Allowance (and a further £9),
## income attracts base rate tax
incometax(12570 + 9 + 1000)

## After the standard Personal Allowance (and a further £9),
## income above the base rate band attracts higher rate tax
incometax(12570 + 9 + 37700 + 1000)

## For every £2 of income above its £100,000 upper limit,
## the standard Personal Allowance decreases by £1
incometax(100000 + 20000)

## At an income of £125,140 or above,
## there is no standard Personal Allowance
incometax(125140)

## Income above the base plus higher rate
## bands attracts additional rate tax
incometax(37700 + 87439 + 10000)

##  -  §  -

## Specifying a bespoke Personal Allowance
## explicitly using the `allowance` argument
incometax(6570 + 9 + 10000, 6570)

## Specifying a pay adjustment using
## a negative `allowance` argument
incometax(125139, -10000)

## Not run:
###
## For further examples, see: -
    vignette("incometax")

## End(Not run)
```

`pers_allow` *Personal allowance calculator*

Description

Calculates the standard Personal Allowance for a given adjusted net income.

Usage

```
pers_allow(adj_net_income, opts = tax_opts())
```

Arguments

adj_net_income	numeric, adjusted net income.
opts	options, as created by tax_opts(), see details.

Details

The standard Personal Allowance is the amount of taxable income on which there is no tax liability, currently £12,570.

The standard Personal Allowance goes down by £1 for every £2 that adjusted net income is above an upper threshold, currently £100,000 and hence falls to zero if taxable income is £125,140 or above.

See GOV.UK Income Tax rates and Personal Allowances.

Value

A numeric vector representing values of the Personal Allowance.

Author(s)

Mark Eisler [aut, cre, cph] (ORCID: <https://orcid.org/0000-0001-6843-3345>)

References

Income Tax rates and Personal Allowances

Personal Allowances: adjusted net income

See Also

Other income_tax: allowance(), incometax(), tax_opts()

Examples

```
## Create a named ascending sequence of possible taxable incomes
## starting at upper threshold of the standard Personal Allowance
(newseq <-
    with(tax_opts(), seq(allow_upper, std_allow * 2 + allow_upper, length.out = 11)) |>
    setNames(nm = _)
)

## Calculate personal allowances on the basis of this sequence
pers_allow(newseq)

## Result is as expected
all.equal(pers_allow(newseq), with(tax_opts(), std_allow - (newseq - allow_upper) / 2))
```

`tax_opts` *Tax bands, rates and allowances*

Description

Options for tax bands, rates and allowances with default values for 2025-2027 tax years.

Usage

```
tax_opts(
  band = c(37700L, 87439L),
  rate = c(0.2, 0.4, 0.45),
  std_allow = 12570L,
  allow_upper = 100000L
)
```

Arguments

`band`	a `numeric` vector giving the width of the *basic* and *higher* rate bands.
`rate`	a `numeric` vector giving the *basic*, *higher* and *additional* tax rates.
`std_allow`	the standard Personal Allowance.
`allow_upper`	upper income limit above which the standard allowance is reduced.

Details

Tax is paid on the amount of taxable income remaining after the Personal Allowance has been deducted, allocated among the *basic*, *higher* and *additional* rates.

Income exceeding the personal allowance by an amount up to and including the value of `band[1]` attract *basic rate* income tax; income exceeding the personal allowance plus `band[1]` by an amount up to and including the value of `band[2]` attract *higher rate* income tax; and income exceeding the personal allowance plus the value of `sum(band)` attract *additional rate* income tax. See `incometax()` *Details* for further information.

Argument `allow_upper` is an income threshold above which the personal allowance goes down by £1 for every £2 taxable income exceeds it, see GOV.UK Income Tax rates and Personal Allowances.

Value

`tax_opts()` returns an object of class `"tax_opts"`, comprising a `list` of its four arguments.

Author(s)

Mark Eisler [aut, cre, cph] (ORCID: <https://orcid.org/0000-0001-6843-3345>)

References

GOV.UK Income Tax rates and allowances for current and previous tax years

See Also

Other income_tax: allowance(), incometax(), pers_allow(),

Examples

```
tax_opts()

## Standard personal allowance
with(tax_opts(), std_allow)

## Upper income limit for every £2 above which the
## standard allowance is reduced by £1
with(tax_opts(), allow_upper)

## Typical income threshold for higher rate income tax
with(tax_opts(), sum(std_allow, band[1]))

## After personal allowance, amount above which
## additional rate income tax is payable
with(tax_opts(), sum(band[1], band[2]))

## Save hypothetical new rates as an object of class "tax_opts"
(newrates <- tax_opts(
    rate = c(0.19, 0.35, 0.43),
    std_allow = 14570,
    allow_upper = 102000))

## Use new rates in hypothetical tax estimations
incometax(120000,, newrates)

allowance(120000, 34015.35 + 6000,, newrates)

incometax(120000, -10370, newrates)
```

Index

∗ **income_tax**
    allowance, 3
    incometax, 5
    pers_allow, 7
    tax_opts, 9
∗ **package**
    Fiscal-package, 2

adjustment *(*allowance*)*, 3
allowance, 3, *6*, *8*, *10*

Fiscal *(*Fiscal-package*)*, 2
Fiscal-package, 2
format, *6*
format.incometax *(*incometax*)*, 5

income_tax *(*incometax*)*, 5
income_tax_options *(*tax_opts*)*, 9
incometax, *3*, *4*, 5, *8–10*

pers_allow, *4*, *6*, 7, *10*
personal_allowance *(*pers_allow*)*, 7
print, *6*
print.incometax *(*incometax*)*, 5

sum, *9*

tax_options *(*tax_opts*)*, 9
tax_opts, *3–6*, *8*, 9