

[Help](#)

```
#include "dps.h"
#include "chk.h"
#include "error_msg.h"
#include "model.h"
static int MOD(Init)(Model *model)
{
    TYPEMOD *pt = (TYPEMOD *) (model->TypeModel);

    if (model->init == 0)
    {
        model->init = 1;
        model->nvar = 0;
        pt->T.Vname = "Current Date";
        pt->T.Vtype = DATE;
        pt->T.Val.V_DATE = 0.;
        pt->T.Viter = ALLOW;
        model->nvar++;

        pt->S0.Vname = "Spot";
        pt->S0.Vtype = PDOUBLE;
        pt->S0.Val.V_PDOUBLE = 100.;
        pt->S0.Viter = ALLOW;
        model->nvar++;

        pt->Divid.Vname = "Annual Dividend Rate";
        pt->Divid.Vtype = DOUBLE;
        pt->Divid.Val.V_DOUBLE = 0.;
        pt->Divid.Viter = ALLOW;
        model->nvar++;

        pt->R.Vname = "Annual Interest Rate";
        pt->R.Vtype = DOUBLE;
        pt->R.Val.V_DOUBLE = 10.;
        pt->R.Viter = ALLOW;
        model->nvar++;

        pt->Rho.Vname = "Rho";
        pt->Rho.Vtype = DOUBLE;
        pt->Rho.Val.V_DOUBLE = 0.5;
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pt->Rho.Viter = ALLOW;
model->nvar++;

pt->Sigma0.Vname = "Current Variance";
pt->Sigma0.Vtype = DOUBLE;
pt->Sigma0.Val.V_DOUBLE = 0.01;
pt->Sigma0.Viter = ALLOW;
model->nvar++;

pt->Kappa.Vname = "Mean Reversion";
pt->Kappa.Vtype = DOUBLE;
pt->Kappa.Val.V_DOUBLE = 2.;
pt->Kappa.Viter = ALLOW;
model->nvar++;

pt->Eta.Vname = "Long-Run Variance";
pt->Eta.Vtype = DOUBLE;
pt->Eta.Val.V_DOUBLE = 0.01;
pt->Eta.Viter = ALLOW;
model->nvar++;

pt->Theta.Vname = "Volatility of Volatility";
pt->Theta.Vtype = DOUBLE;
pt->Theta.Val.V_DOUBLE = 0.2;
pt->Theta.Viter = ALLOW;
model->nvar++;

pt->LambdaS.Vname = "Lambda Spot Jump";
pt->LambdaS.Vtype = DOUBLE;
pt->LambdaS.Val.V_DOUBLE = 0.1382;
pt->LambdaS.Viter = ALLOW;
model->nvar++;

pt->MeanS.Vname = "Mean Spot Jump";
pt->MeanS.Vtype = DOUBLE;
pt->MeanS.Val.V_DOUBLE = 0.1791;
pt->MeanS.Viter = ALLOW;
model->nvar++;

pt->SigmaS.Vname = "Variance Spot Jump";
pt->SigmaS.Vtype = DOUBLE;
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pt->SigmaS.Val.V_DOUBLE = 0.1346;
pt->SigmaS.Viter = ALLOW;
model->nvar++;

pt->LambdaV.Vname = "Lambda Variance Jump";
pt->LambdaV.Vtype = DOUBLE;
pt->LambdaV.Val.V_DOUBLE = 0.;
pt->LambdaV.Viter = ALLOW;
model->nvar++;

pt->MeanV.Vname = "Mean Variance Jump";
pt->MeanV.Vtype = DOUBLE;
pt->MeanV.Val.V_DOUBLE = 1.;
pt->MeanV.Viter = ALLOW;
model->nvar++;

pt->LambdaSV.Vname = "Lambda Spot-Variance Jump correlated ";
pt->LambdaSV.Vtype = DOUBLE;
pt->LambdaSV.Val.V_DOUBLE = 0.;
pt->LambdaSV.Viter = ALLOW;
model->nvar++;

pt->MeanSV.Vname = "Mean Spot Jump correlated ";
pt->MeanSV.Vtype = DOUBLE;
pt->MeanSV.Val.V_DOUBLE = 0.1;
pt->MeanSV.Viter = ALLOW;
model->nvar++;

pt->SigmaSV.Vname = "Variance Spot Jump correlated ";
pt->SigmaSV.Vtype = DOUBLE;
pt->SigmaSV.Val.V_DOUBLE = 0.16;
pt->SigmaSV.Viter = ALLOW;
model->nvar++;

pt->MeanVS.Vname = "Mean Variance Jump correlated ";
pt->MeanVS.Vtype = DOUBLE;
pt->MeanVS.Val.V_DOUBLE = 0.1;
pt->MeanVS.Viter = ALLOW;
model->nvar++;
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        pt->RhoSV.Vname = "Rho_Jump";
        pt->RhoSV.Vtype = DOUBLE;
        pt->RhoSV.Val.V_DOUBLE = 0.5;
        pt->RhoSV.Viter = ALLOW;
        model->nvar++;

    }

    return OK;
}

TYPEMOD dps;
MAKEMOD(dps);
```