SCALARS

NP - Actual number of input points in time series

N - Operator length (a constant in number of samples)

IP - Prediction length (a constant in number of samples)

VECTORS

R(NP) - Assumed additive noise*

Q(NP) - Learning readiness (plant noise)*

- Initializing prediction operator

F(N) - Prediction operators (filter upgrades)
[JTB labeled, "Initializing values (Dan's FO)"]

- Gain vectors

- Input time series

A(NP) - Actual input time series

X(NP+N) - Input time series vector with N leading zeros

XP(NP) - Prediction time series

XE(NP) - Prediction error time series

MATRICES

- Initializing covariance matrix

P(N,N) - Covariance N x N square matrix (error-matrix update)
[JTB labeled, "Initializing values (Dan's Po)"]

- Covariance N x N square matrix (error-matrix update)

USE OF KALMAN ROUTINE: PARAMETERS

Filter Length Parameters:

p Prediction length (a constant in number of samples)

N Operator length (a constant in number of samples)

White Noise Parameters:

R_t Assumed additive noise (constant or time series)

q_t Learning readiness (constant or time series)

Initializing Arrays:

f_0 Prediction operator (vector of length N; normally all zero values)

P_0 Covariance matrix (N x N square matrix; normally identity matrix)