

Input Data Set	
Name	WORK.PREPROCESSEDDATA
Label	U.S. Violent Crime Data 1989-1997
Time ID Variable	Date

Estimation Span Summary									
Variable	Type	First Obs	Last Obs	NObs	NMiss	Min	Max	Mean	Standard Deviation
MurdersTX	Dependent	JAN1989	DEC1997	108	0	85.00000	280.00000	166.47222	39.87280

Forecast Span Summary									
Variable	Type	First Obs	Last Obs	NObs	NMiss	Min	Max	Mean	Standard Deviation
MurdersTX	Dependent	JAN1989	DEC1997	108	0	85.00000	280.00000	166.47222	39.87280

Preliminary Estimates of the Free Parameters		
Component	Parameter	Estimate
Irregular	Error Variance	4711.21769
Level	Error Variance	1766.70663
Slope	Error Variance	1766.70663
Season	Error Variance	2443.85047

Likelihood Based Fit Statistics	
Statistic	Value
Full Log Likelihood	-431.5
Diffuse Part of Log Likelihood	-4.97
Non-Missing Observations Used	108
Estimated Parameters	4
Initialized Diffuse State Elements	13
Normalized Residual Sum of Squares	95
AIC (smaller is better)	870.96
BIC (smaller is better)	881.17
AICC (smaller is better)	871.4
HQIC (smaller is better)	875.08
CAIC (smaller is better)	885.17

Likelihood Optimization Algorithm Converged in 6 Iterations.

Final Estimates of the Free Parameters					
Component	Parameter	Estimate	Approx Std Error	t Value	Approx Pr > t
Irregular	Error Variance	239.38162	48.55214	4.93	<.0001
Level	Error Variance	25.44934	18.72870	1.36	0.1742
Slope	Error Variance	0.08117	0.13315	0.61	0.5421
Season	Error Variance	1.87519	5.64980	0.33	0.7400

Fit Statistics Based on Residuals	
Mean Squared Error	502.09238
Root Mean Squared Error	22.40742
Mean Absolute Percentage Error	10.22714
Maximum Percent Error	34.18651
R-Square	0.71581
Adjusted R-Square	0.70645
Random Walk R-Square	0.27292
Amemiya's Adjusted R-Square	0.69083
Number of non-missing residuals used for computing the fit statistics = 95	

Significance Analysis of Components (Based on the Final State)			
Component	DF	Chi-Square	Pr > ChiSq
Irregular	1	0.55	0.4590
Level	1	133.11	<.0001
Slope	1	0.99	0.3202
Season	11	56.83	<.0001

Trend Information (Based on the Final State)		
Name	Estimate	Standard Error
Level	102.9402892	8.9222689
Slope	-1.28937299	1.2971184

Summary of Seasons			
Name	Type	Season Length	Error Variance
Season	DUMMY	12	1.87519

Outlier Summary							
Obs	Date	Break Type	Estimate	Standard Error	Chi-Square	DF	Pr > ChiSq
19	JUL1990	Additive Outlier	65.69128	18.195074	13.03	1	0.0003
89	MAY1996	Additive Outlier	47.68446	18.195255	6.87	1	0.0088

Forecasts for Variable MurdersTX					
Obs	Date	Forecast	Standard Error	95% Confidence Limits	
109	JAN1998	92.526616	20.05145	53.226492	131.826740
110	FEB1998	78.163267	20.93265	37.136030	119.190505
111	MAR1998	88.625620	21.92298	45.657367	131.593872
112	APR1998	81.373350	22.94284	36.406208	126.340492
113	MAY1998	94.666739	23.98829	47.650546	141.682932
114	JUN1998	94.687462	25.05740	45.575858	143.799065
115	JUL1998	115.470298	26.14851	64.220161	166.720436
116	AUG1998	117.377829	27.26015	63.948913	170.806744
117	SEP1998	99.629876	28.39101	43.984523	155.275228
118	OCT1998	94.597461	29.53973	36.700663	152.494259
119	NOV1998	82.379398	30.70174	22.205101	142.553695
120	DEC1998	95.214461	31.79383	32.899698	157.529224

