"General" Data Table

Column Heading	UDG Code	Column Description
Series Name	`srsnam`	Name of series. This is the *name* argument in the series spec, if given, or the name of the output files otherwise.
View Spec File		Press the button to show the spec file that was used to adjust the series. Only works if the row was added automatically when the series was run.
Filename	n/a	Name of the output files
Period	`freq`	Number of observations per year.
Transform	`transform` if transformation is hard-coded, and `aictrans` if chosen by AIC test.	Transformation. Includes "**" if the transformation was automatically selected.
Mode	`samode` if transformation is hard-coded, and `finmode` if chosen by AIC test.	Seasonal adjustment mode. Includes "**" if the mode was automatically selected.
Span	`span`	Span of data adjusted.
Outlier Span	`outlierspan`	Span of data checked for outliers.
AO/LS/TC Crit Val	`aocrit / lscrit / tccrit`	Critical |t| values for additive outliers, level shifts, and temporary changes, separated by a slash. "*" indicates it was chosen by X-13ARIMA-SEATS; "--" indicates this type of outlier was not searched for.
# Outliers	`outlier.total`	Number of hard-coded and automatically selected outliers.
# Auto	`autoout`	Number of outliers automatically selected.
# Iter	`niter, maxiter, tol`	Number of iterations to reach convergence. If the maximum number of iterations was changed from the default (1500), the cell will also show an "m". If the convergence tolerance was changed from the default (0.00001), the cell will also contain a "t".
# Forecasts	`nfcst`	Number of forecasted values.
Forecast mode	`aape.mode`	Indicates whether forecasts are within sample or out of sample.

"Model Info" Data Table

Column Heading	UDG Code	Column Description
Series Name	`srsnam`	Name of series.
Model Span	`modelspan`	Span of data used to estimate regARIMA model coefficients.
ARIMA Model	`arimamdl` gives the model. `automdltype` tells whether it was automatically selected.	ARIMA model; "**" indicates the model was selected automatically by the program.
Regressors	finalreg01, finalreg01,...	The regressors included in the model.

Column Heading	UDG Code	Column Description
Trading Day	See regressor info below	Trading day regressors included, with t-values if only one regressor and p-values of the chi-squared test of groups of regressors if multiple regressors; "**" indicates trading day was included based on results of AIC test.
Holiday	See regressor info below	Easter, Thanksgiving, or Labor Day regressors (with their t-values) included; "**" indicates Easter was included based on results of AIC test.
Seasonal	See regressor info below	Seasonal or trigonometric seasonal regressors included, with the p-value of the chi-squared test.
Constant	See regressor info below	Gives the t-value of the constant, if it is included.
User	See regressor info below	Gives t-values of user defined regressors included, and p-value of the chi-squared test of the group of regressors, if there is more than one; "**" indicates user regressors are included based on results of AIC test.
Coded Outliers	See regressor info below	The outliers hard-coded in the spec file, with their t-values.
Auto Outliers	See regressor info below	The outliers automatically found, with their t-values.
Variance	`variance$mle`	Innovation variance of the ARIMA model.
Phi1	`AR$Nonseasonal$01$01`	Estimate of nonseasonal AR parameter at lag 1.
Sum NS AR	Sum of `AR$Nonseasonal$01$01` to `AR$Nonseasonal$01$0p`, where p is the nonseasonal AR order	Sum of all nonseasonal AR parameter estimates.
Theta1	`MA$Nonseasonal$01$01`	Estimate of nonseasonal MA parameter at lag 1.
Sum NS MA	Sum of `MA$Nonseasonal$01$01` to `MA$Nonseasonal$01$0q`, where q is the nonseasonal MA order	Sum of all nonseasonal MA parameter estimates.
Sum Seas AR	Sum of `AR$Seasonal$s$s` to `AR$Seasonal$s$P`, where s is the period and P is the seasonal AR order times s	Sum of all seasonal AR parameter estimates.
Sum Seas MA	Sum of `MA$Seasonal$s$s` to `MA$Seasonal$s$Q`, where s is the period and Q is the seasonal MA order times s	Sum of all seasonal MA parameter estimates.

Column Heading	UDG Code	Column Description
Successful SEATS Adj?	`samode` tells whether it's a SEATS adjustment; `seatsadj` tells whether the SEATS adjustment was successful.	If a SEATS adjustment was requested and the decomposition was not successful (that is, there is no seasonal adjustment), this column will be 'no'. If it was successful, if will say 'yes'. If no SEATS decomposition was attempted, it will read 'n/a'.
SEATS Model	Compares `arimamdl` to `seatsmdl`	If the SEATS procedure changed the ARIMA model specified by the arima{} spec or selected by the automatic model procedure, then this column will give the SEATS model.

"Model Diagnostics" Data Table

Column Heading	UDG Code	Column Description
Series Name		Name of series.
AICC	`aicc`	F-adjusted Akaike's Information Criterion (corrected for sample size).
aa FcE (3-yr)	`aape.0`	Average absolute percentage error of forecasts in the last three years. An average of the 1-step ahead to 12-step ahead (4-step ahead for quarterly series) forecasts of the data with one, two and three years removed. By default, this is calculated using within-sample forecasts, but it can be done with out-of-sample forecasts if requested.
Normal?	`skewness` ends with "+" or "-" if residuals are skewed; `a` ends with "*" if Geary's a test indicates non-normality; `kurtosis` ends with "*" if the kurtosis test indicates non-normality.	Indicates whether residuals pass normality tests. If they fail the skewness test: "skewed +/-"; if they aren't skewed but fail Geary's a test: "failed (a)"; if they aren't skewed and pass Geary's a but fail the kurtosis test: "failed (k)".
# LBQ Fail	`nlbq`	Number of the lags from 1 to 24 with significant Ljung-Box Q statistic.
Sig LBQ	`lblags`	List of lags with significant LBQ.
Sig Seas LBQ	List of the seasonal lags in `lblags`	Seasonal lags with significant LBQ.
# BPQ Fail	`nbpq`	Number of the lags from 1 to 24 with significant Box-Pierce Q statistic.
Sig BPQ	`bplags`	List of lags with significant BPQ.
Sig Seas BPQ	List of the seasonal lags in `bplags`	Seasonal lags with significant BPQ.
Sig ACF	`sigacflags`	Lags with significant autocorrelation in the residuals.
Sig Seas ACF	List of the seasonal lags in `sigacflags`	Seasonal lags with significant autocorrelation in the residuals.
Sig PACF	`sigpacflags`	Lags with significant partial autocorrelation in the residuals.

Column Heading	UDG Code	Column Description
Sig Seas PACF	List of the seasonal lags in `sigpacflags`	Seasonal lags with significant partial autocorrelation in the residuals.
Resid Peaks	`spcrsd.s1, spcrsd.s2, spcrsd.s3, spcrsd.s4, spcrsd.s5, spcrsd.t1, spcrsd.t2`: If the peak height is 6.0 or greater and the udg entry ends with a "+" to indicate the peak is greater than the median, it is visually significant.	Indicates the visually significant seasonal and trading day peaks in the spectrum of the model residuals.
QS Residuals	`qsrsd[2]`	QS statistic of the residuals.
QSS Residuals	`qssrsd[2]`	QS statistic of the residuals on the last 96 observations (8 years for a monthly series).
Avg Sq Fcst Err 1 Period		
Avg Sq Fcst Err 1 Year		

"x11" Data Table

Column Heading	UDG Code	Column Description
Series Name	`srsnam`	Name of series.
Sigma Lim	`siglim`	Lower and upper sigma limits for downweighting extreme values.
Seasonal MA	`seasonalma` if the filter is hard-coded; `sfmsr` if it's automatically selected.	Seasonal moving average filter; "**" indicates the filter was chosen by X-13ARIMA-SEATS.
Trend MA	`trendma` if the filter length is hard-coded; `finaltrendma` if it's automatically selected.	Length of the final Henderson trend filter; "**" indicates the filter was chosen by X-13ARIMA-SEATS.
I/S Ratio	`f2.is`	The final irregular/seasonal Ratio from Table D10; also called the global moving seasonality ratio.
I/C Ratio	`f2.ic`	The final irregular/trend ratio from Table D12.
D8F	`f2.fsd8[1]`	F-statistic of test for seasonality assuming stability from D8 table.
D8F p-val	`f2.fsd8[2]`/100	p-value of D8 F statistic.
D11F	`d11.f[2]`/100	p-value of D11 F statistic for residual seasonality.
D11F 3 yr	`d11.3y.f[2]`/100	p-value of D11 F statistic for residual seasonality in the last three years.
M1	`f3.m01`	The relative contribution of the irregular over three months span.
M2	`f3.m02`	The relative contribution of the irregular component to the stationary portion of the variance.

Column Heading	UDG Code	Column Description
M3	f3.m03	The amount of period-to-period change in the irregular component as compared to the amount of period-to- period change in the trend-cycle.
M4	f3.m04	The amount of autocorrelation in the irregular as described by the average duration of run.
M5	f3.m05	The number of months it takes the change in the trend-cycle to surpass the amount of change in the irregular.
M6	f3.m06	The amount of year-to-year change in the irregular as compared to the amount of year-to-year change in the seasonal.
M7	f3.m07	The amount of moving seasonality present relative to the amount of stable seasonality.
M8	f3.m08	The size of the fluctuations in the seasonal component throughout the whole series.
M9	f3.m09	The average linear movement in the seasonal component.
M10	f3.m10	As M8, calculated for recent years only.
M11	f3.m11	As M9, calculated for recent years only.
Q	f3.q	A weighted average of M1-M11.
Q2	f2.qm2	A weighted average of M1-M11 without M2.
MCD	f2.mcd	Months for Cyclical Dominance

"Spectrum & QS" Data Table

Column Heading	UDG Code	Column Description
Series Name	srsnam	Name of series.
Sig Ori Peaks	spcori.s1, spcori.s2, spcori.s3, spcori.s4, spcori.s5, spcori.t1, spcori.t2: If the peak height is 6.0 or greater and the udg entry ends with a "+" to indicate the peak is greater than the median, it is visually significant.	Indicates the visually significant seasonal and trading day peaks in the spectrum of the (possibly differenced, transformed, prior-adjusted) original series.
QS Ori	qsori[2]	QS statistic of the original series.
QSS Ori	qssori[2]	QS statistic of the original series calculated using the spectrum span.
QS Ori Adj Ext	qsorievadj[2]	QS statistic of the original series adjusted for extreme values.
QSS Ori Adj Ext	qssorievadj[2]	QS statistic of the original series adjusted for extreme values calculated using the spectrum span.
Tukey Ori Peaks	Lists the frequencies where spcori.tukey.s1, spcori.tukey.s2,	Lists the seasonal and trading day frequencies where the Tukey spectrum of the original series has

Column Heading	UDG Code	Column Description
	`spcori.tukey.s3`, `spcori.tukey.s4`, `spcori.tukey.s5`, `spcori.tukey.td` are greater than 0.99 or 0.90.	a peak with a significance level greater than 0.99 or 0.90.
Sig SAdj Peaks	`spcsa.s1, spcsa.s2, spcsa.s3, spcsa.s4, spcsa.s5, spcsa.t1, spcsa.t2`: If the peak height is 6.0 or greater and the udg entry ends with a "+" to indicate the peak is greater than the median, it is visually significant.	Indicates the visually significant seasonal and trading day peaks in the spectrum of the seasonally adjusted series.
Sig Irr Peaks	`spcirr.s1, spcirr.s2, spcirr.s3, spcirr.s4, spcirr.s5, spcirr.t1, spcirr.t2`: If the peak height is 6.0 or greater and the udg entry ends with a "+" to indicate the peak is greater than the median, it is visually significant.	Indicates the visually significant seasonal and trading day peaks in the spectrum of the modified irregular.
Nonsig Seasonal Peaks	Looks at all the S1-S4 spectrum entries (see columns Sig Ori Peaks, Sig SAdj Peaks, Sig Irr Peaks, and Resid Peaks) for peaks less than 6.0 or not greater than the median.	Indicates whether there is a nonsignificant peak at any of S1, S2, S3, or S4 in the spectrum of the seasonally adjusted series ("sadj"), irregular ("irr"), or residuals ("rsd"). Also gives the height in stars of the tallest of these peaks.
Nonsig TD Peaks	Looks at all the T1 spectrum entries (see columns Sig Ori Peaks, Sig SAdj Peaks, Sig Irr Peaks, and Resid Peaks) for peaks less than 6.0 or not greater than the median.	Indicates whether there is a nonsignificant peak at T1 in the spectrum of the seasonally adjusted series ("sadj"), irregular ("irr"), or residuals ("rsd"). Also gives the height in stars of the tallest of these peaks.
QS Sadj	`qssadj[2]`	QS statistic of the seasonally adjusted series.
QSS Sadj	`qsssadj[2]`	QS statistic of the seasonally adjusted series calculated using the spectrum span.
QS Sadj Adj Ext	`qssadjevadj[2]`	QS statistic of the seasonally adjusted series adjusted for extreme values.
QSS Sadj Adj Ext	`qsssadjevadj[2]`	QS statistic of the seasonally adjusted series adjusted for extreme values calculated using the spectrum span.
QS Irr	`qsirr[2]`	QS statistic of the irregular component.

Column Heading	UDG Code	Column Description
QSS Irr	`qssirr[2]`	QS statistic of the irregular component calculated using the spectrum span.
QS Irr Adj Ext	`qsirrevadj[2]`	QS statistic of the irregular component adjusted for extreme values.
QSS Irr Adj Ext	`qssirrevadj[2]`	QS statistic of the irregular component adjusted for extreme values calculated using the spectrum span.
Tukey Sadj Peaks	Lists the frequencies where `spcsa.tukey.s1`, `spcsa.tukey.s2`, `spcsa.tukey.s3`, `spcsa.tukey.s4`, `spcsa.tukey.s5`, `spcsa.tukey.td` are greater than 0.99 or 0.90.	Lists the seasonal and trading day frequencies where the Tukey spectrum of the seasonally adjusted series has a peak with a significance level greater than 0.99 or 0.90.
Tukey Irr Peaks	Lists the frequencies where `spcirr.tukey.s1`, `spcirr.tukey.s2`, `spcirr.tukey.s3`, `spcirr.tukey.s4`, `spcirr.tukey.s5`, `spcirr.tukey.td` are greater than 0.99 or 0.90.	Lists the seasonal and trading day frequencies where the Tukey spectrum of the irregular has a peak with a significance level greater than 0.99 or 0.90.
Tukey Rsd Peaks	Lists the frequencies where `spcrsd.tukey.s1`, `spcrsd.tukey.s2`, `spcrsd.tukey.s3`, `spcrsd.tukey.s4`, `spcrsd.tukey.s5`, `spcrsd.tukey.td` are greater than 0.99 or 0.90.	Lists the seasonal and trading day frequencies where the Tukey spectrum of the residuals has a peak with a significance level greater than 0.99 or 0.90.

"Stability Diagnostics" Data Table

Column Heading	UDG Code	Column Description
Series Name	`srsnam`	Name of series.
Rev Span	`revspan`	Span of data of revision history analysis.
SA.AAR	`r01.lag00.aar.all`	Average absolute percent revisions of the seasonal adjustments.
MM.AAR	`r02.lag00.aar.all`	Average absolute revision of the month-to-month percent change of the adjustments.
#Spans	`ssa[1]`	Number of spans for sliding spans analysis.
Span Length	`ssa[2]`	Length of each span.
SF Cut	`sscut[1]`	Threshold value for the seasonal factors.
SF75p	`s3.a.hinge[4]`	75th percentile of maximum percent differences across spans of seasonal factors.

Column Heading	UDG Code	Column Description
SF%	`s2.a.per[3]`	Percent of months (quarters) with a maximum absolute percent change of the seasonal factors greater than the threshold.
SA Cut	`sscut[3]`	Threshold value for the seasonal adjustment values.
SA75p	`s3.c.hinge[4]`	75th percentile of maximum percent differences across spans of the seasonally adjusted series.
SA%	`s2.c.per[3]`	Percent of months (quarters) with a maximum absolute percent change of the seasonal adjustment values greater than the threshold.
MM Cut	`sscut[4]`	Threshold value for the period-to-period percent change in the seasonally adjusted series.
MM60p	`s3.d.hinge[4]`	60th percentile of maximum percent differences across spans of period-to-period changes in the seasonally adjusted series.
MM%	`s2.d.per[3]`	Percent of months (quarters) with a maximum absolute difference of period-to-period change in the seasonally adjusted series greater than the threshold.
TD Cut	`sscut[2]`	Threshold value for trading day factors.
TD75p	`s3.b.hinge[4]`	75th percentile of maximum percent differences across spans of trading day factors.
TD%	`s2.b.per[3]`	Percent of months (quarters) with a maximum absolute percent change of the trading day factors greater than the threshold.
YY Cut	`sscut[5]`	Threshold value for the year-to-year change in the seasonally adjusted series.
YY90p	`s3.e.hinge[5]`	90th percentile of maximum percent differences across spans of year-to-year changes in the seasonally adjusted series.
YY%	`s2.e.per[3]`	Percent of months (quarters) with a maximum absolute difference of year-to-year change in the seasonally adjusted series greater than the threshold.

Regressor information

Regression variables have a two-part name in the udg file, separated by a '$'. The first part is the type of regression variable, and the second a more specific identifier. The values are in three parts: the estimate, the standard error, and the t-value.

Outliers

Hard-coded outliers are listed as Outlier$XXyyyy.mm (where Mm can be a 1-digit number, 2-digit number, or 3-letter abbreviation of the month and XX is the outlier type). Automatically identified outliers are referred to as AutoOutlier$XXyyyy.mm.

Trading Day

The first part of the trading day regressor name refers to the type of trading day regressor. It's either

- Trading Day

- 1-Coefficient Trading Day
- Stock Trading Day[w]
- 1-Coefficient Stock Trading Day[w]

where w is replaced with the day of the inventory (often 31 for end-of-month inventories or 1 for beginning-of-month inventories. The second part is Weekday for the 1-coefficient trading days. For the 6-coefficient trading day variables there are six entries in the udg file, with the second part of the name being a three letter abbreviation of the day: Mon, Tue, Wed, Thu, Fri, Sat.

When there is no transformation the default trading day regressor includes a variable for leap year or length of month/quarter; look for Leap Year$Leap Year, Length-of-Month$Length-of-Month, or Length-of-Quarter$Length-of-Quarter.

Trading day regressors with more than one variable will also have an F-test for the combined effect. The udg file name for this is ftest$Trading Day or ftest$Stock Trading Day[w]. The value has four numbers: the two degrees of freedom, the F-statistic, and the p-value.

Holidays

Holidays are listed as:

- Easter[w]$Easter[w]
- StockEaster[w]$StockEaster[w]
- Labor[w]$Labor[2]
- Thanksgiving[w]$Thanksgiving[w]

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Seasonal Regressors

Each seasonal regressor has Seasonal as the first part of the name and a three-letter abbreviation for the month or 1st, 2nd, 3rd, and 4th for the quarter.

The F-test for the combined seasonal regressors is given as ftest$Seasonal. The value has four numbers: the two degrees of freedom, the F-statistic, and the p-value.

User-defined Regressors

For user-defined regressors with the default usertype, the first part of the name is User-defined and the second part is the name given in the user argument in the spec file. If a usertype is provided, the first part of the name reflects that; for example, User-defined Trading Day, User-defined Holiday, etc.