

Using PROC PRINTTO

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Introduction

The PRINTTO procedure is used to route the SAS log and SAS procedure output to a user-specified, alternate location. The destination can be a printer, a permanent file, or a dummy file. It can be used to redirect output from different steps of a SAS job to different filerefs, or to selectively suppress output, or to enable SAS output to be used as *input* data within the same job.

The PRINTTO procedure itself doesn't produce printed output, but instead tells the SAS System to route the results of all procedures which follow the PROC PRINTTO statement, or until another PROC PRINTTO statement is encountered.

The syntax is:

```
PROC PRINTTO <LOG='your-alternate-log-file'>  
             <FILE='your-alternate-output-file'>  
             <NEW>;
```

All output produced after PROC PRINTTO is executed is sent to the specified alternate location until another PROC PRINTTO statement has been executed, or until the SAS job or SAS session has ended. PROC PRINTTO can be executed as often as is necessary in a SAS job.

PROC PRINTTO can be used to route the output from different procedures to different files. For example, you might want to route the output from a certain procedure to a text file for later use, but with all other output produced by your program sent to the default destination.

PROC PRINTTO also can be used to route output to a text file, from which data can be selected for use as input in subsequent DATA steps. This is particularly useful with statistical procedures. Many SAS procedures generate printed statistics which do not become part of an output data set (chi-squares, medians, significance probabilities, etc.). By using PROC PRINTTO with some additional DATA-step programming, this situation can be remedied.

An example follows which illustrates one way in which PROC PRINTTO can be used. I encourage readers to find a few uses of their own.

Example

As an example, consider the following situation: a seasonality analysis is to be performed on data pertaining to the numbers of original tax audits completed in a given month and year, for more than one state tax (in this case, sales tax and franchise tax).

The standard procedure would be to run PROC X11 against these time series, and then to carefully examine the plentiful printouts generated by this procedure. Most of the time, the time series analyst doesn't really *need* to wade through *all* of the tables and charts (or, at least, he/she wouldn't *want* to, particularly if the number of time series to be analyzed is large). Usually, the first thing he/she does is to look at the "Stable Seasonality Test" which follows Table D8, and then, if the F-test indicates that stable seasonality is present, to study Tables D10 and D11, "Final Seasonal Factors" and "Final Seasonally Adjusted Series", respectively.

Here are some sample results for the actual time series:

```
*** SEASONALLY ADJUST MONTHLY AUDIT SUMMARY DATA *****;
PROC X11 DATA=AUDITS;
  VAR NUMSALS NUMFRAN;
  MONTHLY START=JAN80 END=SEP92;
  OUTPUT OUT=SEAS B1=O_SALS O_FRAN
                 D8=SI_SALS SI_FRAN
                 D10=SF_SALS SF_FRAN
                 D11=ADJSALS ADJFRAN
                 D12=TR_ASLS TR_FRAN;
  ID CYMM;
  TITLE "ORIGINAL AUDITS COMPLETED BY COMPTROLLER'S OFFICE AUDITORS";
```

ORIGINAL AUDITS COMPLETED BY COMPTROLLER'S OFFICE AUDITORS

Series - NUMSALS # OF SALES TAX AUDITS COMPLETED
Period covered - 1/1980 to 9/1992

Type of run multiplicative seasonal adjustment.
Standard printout. Standard charts.
Sigma limits for graduating extreme values are 1.5 and 2.5
Irregular values out side of 2.5-sigma limits are excluded
from trading day regression

BI Original Series Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
1980	650.000	518.000	618.000	569.000	563.000	541.000	579.000	479.000	413.000	589.000	389.000	534.000	6442
1981	617.000	537.000	693.000	522.000	482.000	487.000	489.000	525.000	564.000	506.000	398.000	559.000	6379
1982	559.000	578.000	568.000	492.000	496.000	560.000	584.000	536.000	591.000	557.000	547.000	652.000	6720
1983	650.000	627.000	704.000	678.000	704.000	807.000	632.000	696.000	795.000	712.000	750.000	772.000	8527
1984	778.000	755.000	902.000	836.000	902.000	868.000	910.000	877.000	904.000	879.000	812.000	678.000	9901
1985	903.000	812.000	1024	1009	1069	897.000	962.000	993.000	1010	1211	960.000	990.000	11840
1986	1107	988.000	1030	895.000	1049	941.000	1019	973.000	973.000	1074	840.000	921.000	11810
1987	872.000	825.000	1085	809.000	786.000	892.000	1239	904.000	914.000	943.000	647.000	739.000	10655
1988	764.000	703.000	1033	911.000	869.000	1026	908.000	1098	917.000	887.000	899.000	989.000	11014
1989	985.000	864.000	910.000	850.000	892.000	903.000	838.000	916.000	791.000	921.000	865.000	720.000	10455
1990	948.000	1031	1101	886.000	1086	1075	1064	967.000	832.000	1140	1076	786.000	11992
1991	1198	978.000	1198	1154	1156	955.000	1013	930.000	925.000	1031	831.000	726.000	12095
1992	956.000	954.000	935.000	1017	871.000	985.000	1008	805.000	899.000	.	.	.	8430
Avg	845.154	782.308	907.769	817.538	840.385	841.308	865.000	807.615	809.846	871.667	751.167	755.500	
Total:	126260	Mean:	825.23	S.D.:	198.38								

Series - NUMFRAN # OF FRANCHISE TAX AUDITS COMPLETED
Period covered - 1/1980 to 9/1992

Type of run multiplicative seasonal adjustment.
Standard printout. Standard charts.
Sigma limits for graduating extreme values are 1.5 and 2.5
Irregular values out side of 2.5-sigma limits are excluded
from trading day regression

BI Original Series Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
1980	455.000	355.000	400.000	391.000	459.000	451.000	401.000	403.000	329.000	410.000	401.000	431.000	4886
1981	464.000	446.000	742.000	521.000	410.000	398.000	479.000	361.000	408.000	450.000	348.000	385.000	5412
1982	390.000	443.000	497.000	447.000	473.000	419.000	499.000	391.000	467.000	492.000	440.000	421.000	5379
1983	516.000	484.000	570.000	582.000	584.000	594.000	529.000	520.000	729.000	646.000	632.000	604.000	6990
1984	648.000	578.000	695.000	770.000	847.000	649.000	706.000	533.000	697.000	797.000	700.000	575.000	7993
1985	799.000	670.000	847.000	871.000	916.000	787.000	887.000	830.000	962.000	1113	896.000	875.000	10453
1986	975.000	844.000	917.000	947.000	1018	819.000	889.000	813.000	711.000	708.000	483.000	552.000	9676
1987	389.000	428.000	397.000	311.000	313.000	223.000	337.000	241.000	219.000	219.000	168.000	69.000	3314
1988	47.000	13.000	15.000	9.000	45.000	56.000	31.000	23.000	24.000	55.000	71.000	44.000	433.000
1989	82.000	64.000	71.000	38.000	63.000	44.000	63.000	56.000	35.000	32.000	18.000	29.000	585.000
1990	30.000	40.000	38.000	14.000	18.000	52.000	41.000	32.000	41.000	42.000	53.000	28.000	429.000
1991	66.000	71.000	59.000	70.000	82.000	94.000	110.000	114.000	88.000	92.000	93.000	118.000	1057
1992	125.000	114.000	97.000	74.000	146.000	175.000	144.000	167.000	109.000	.	.	.	1151
Avg	383.385	350.000	411.154	388.077	397.231	366.231	393.538	344.923	370.692	421.333	358.583	344.250	
Total:	57758	Mean:	377.5	S.D.:	295.9								

ORIGINAL AUDITS COMPLETED BY COMPTROLLER'S OFFICE AUDITORS

X11 Procedure

Seasonal Adjustment of - NUMSALS # OF SALES TAX AUDITS COMPLETED

08 Final Unmodified SI Ratios														
Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Avg	
1980	116.224	91.710	108.828	99.785	98.978	96.372	106.026	90.929	80.872	116.884	76.764	103.462	98.903	
1981	117.092	100.762	130.471	99.577	93.395	95.298	95.534	101.481	107.775	95.995	75.523	107.085	101.666	
1982	108.497	112.988	110.558	94.542	93.560	103.527	105.810	95.301	103.002	94.969	91.040	105.627	101.618	
1983	102.461	96.411	105.931	99.883	101.740	114.599	88.220	95.549	107.408	94.689	98.090	99.246	100.352	
1984	98.169	93.228	108.810	98.545	104.347	99.219	103.750	77.384	103.834	101.520	93.866	77.528	96.683	
1985	100.935	88.303	108.543	105.139	110.398	92.052	98.015	99.947	99.469	116.033	90.157	92.598	100.132	
1986	104.839	95.721	102.369	90.899	107.980	97.550	105.613	100.662	101.130	112.527	88.646	97.843	100.482	
1987	93.405	89.178	118.587	89.329	87.366	99.701	139.581	103.149	106.441	112.991	79.495	81.749	100.914	
1988	94.009	84.295	119.696	102.201	95.259	110.880	97.263	116.714	96.209	92.826	92.599	102.715	100.369	
1989	104.320	94.379	102.746	98.636	105.211	106.939	98.715	107.056	91.761	105.553	97.323	79.335	99.332	
1990	102.259	108.740	113.606	89.860	108.869	106.761	104.872	94.338	80.256	108.991	102.036	73.718	99.525	
1991	111.351	90.648	111.716	108.960	110.955	93.604	101.611	95.375	96.600	109.212	88.969	76.579	99.798	
1992	104.569	104.766	102.706	111.608	95.505	107.562	109.402	86.824	95.892	.	.	.	102.093	
Avg	104.472	96.241	111.121	99.151	101.043	101.851	104.185	97.285	97.742	105.183	89.542	92.457		

Total: 15316

Stable Seasonality Test

	Sum of Squares	Dgrs. of Freedom	Mean Square	F
Between Months	4825.013	11	438.638	5.500
Error	11245.120	141	79.753	
Total	16070.133	152		
Probability of a Larger F is < 0.0001				

D10 Final Year	Seasonal JAN	Factors FEB												
			MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Avg	
1980	112.059	96.087	109.078	98.119	96.143	98.231	102.339	95.774	105.580	95.197	87.930	104.294	100.069	
1981	110.690	95.938	108.920	98.231	96.909	98.217	102.496	95.934	105.679	95.697	88.890	103.556	100.097	
1982	108.338	95.605	108.788	98.622	98.441	97.940	102.064	96.639	105.366	97.589	90.505	102.202	100.175	
1983	105.578	94.774	108.222	98.262	100.616	97.861	102.314	97.275	104.408	100.454	91.536	100.352	100.138	
1984	102.833	93.824	108.272	97.572	103.084	97.472	102.271	98.359	103.804	104.072	91.884	98.098	100.129	
1985	100.408	92.168	109.161	96.794	104.440	98.305	102.458	99.541	102.783	107.198	91.245	95.704	100.017	
1986	99.237	90.981	110.180	96.633	104.915	99.485	101.655	101.457	101.391	109.513	90.710	92.796	99.913	
1987	99.066	90.838	111.028	96.300	104.557	101.810	101.476	102.493	99.083	110.206	91.262	89.485	99.809	
1988	99.934	91.217	111.584	96.965	104.777	103.340	101.394	102.472	97.240	109.800	92.242	85.772	99.728	
1989	101.132	92.577	111.528	99.123	104.285	104.752	101.974	100.578	95.449	108.891	93.739	82.443	99.706	
1990	103.154	94.193	110.368	101.921	104.561	104.765	102.605	98.490	94.316	108.263	94.610	79.895	99.762	
1991	104.780	96.287	108.903	103.861	104.585	104.645	103.722	95.962	93.525	107.959	95.539	78.656	99.869	
1992	105.762	97.397	108.435	104.218	105.205	103.956	104.386	94.485	93.410	.	.	.	101.917	
Avg	104.075	93.991	109.574	98.971	102.501	100.837	102.396	98.420	100.156	104.570	91.674	92.771		

Total: 15310

D11 Final Seasonally Adjusted Series														Total
Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC		
1980	580.054	539.095	566.568	579.907	585.588	550.744	565.769	500.136	391.172	618.716	442.397	512.016		6432
1981	557.411	559.739	636.245	531.400	497.372	495.840	477.093	547.251	533.691	528.750	447.744	539.804		6352
1982	515.975	604.574	522.117	498.875	503.855	571.778	572.190	554.641	560.900	570.760	604.386	637.950		6718
1983	615.656	661.577	650.514	689.995	699.689	824.643	617.707	715.499	761.434	708.785	819.350	769.293		8534
1984	756.565	804.700	833.085	856.800	875.017	890.516	889.792	888.293	870.875	844.611	883.724	691.145		9885
1985	899.333	880.998	938.063	1042	1024	912.485	938.919	997.575	982.656	1130	1052	1034		11832
1986	1116	1086	934.837	926.185	999.862	945.875	1002	959.027	959.649	980.708	926.024	992.505		11829
1987	880.223	908.205	977.231	840.087	751.746	875.282	1221	882.008	922.458	855.667	708.948	825.839		10649
1988	764.501	770.687	925.760	939.518	829.382	992.835	895.513	1072	943.028	816.943	974.612	1153		11077
1989	973.972	933.275	815.937	857.517	855.349	862.035	821.776	910.740	828.714	845.800	922.779	873.333		10501
1990	919.015	1095	997.575	869.304	1039	1026	1037	981.830	882.138	1053	1137	983.795		12020
1991	1143	1016	1100	1111	1105	912.612	976.648	969.137	989.045	954.990	869.803	923.005		12071
1992	903.920	979.495	862.269	975.636	827.906	947.516	965.642	851.989	962.426	.	.	.		8277
Avg	817.345	833.736	827.713	824.535	814.867	831.404	844.725	817.665	814.476	825.701	815.764	828.015		

Total: 126178 Mean: 824.69 S.D.: 190.73

ORIGINAL AUDITS COMPLETED BY COMPTROLLER'S OFFICE AUDITORS

X11 Procedure

Seasonal Adjustment of - NUMFRAN # OF FRANCHISE TAX AUDITS COMPLETED

DB Final Year	Unmodified JAN	SI FEB	Ratios MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Avg
1980	129.613	99.269	108.290	101.809	114.547	108.727	94.417	93.468	75.539	93.182	89.719	94.622	100.265
1981	100.492	96.010	159.767	113.470	90.855	89.925	110.469	85.039	97.888	109.030	84.540	93.282	102.564
1982	93.827	105.404	116.693	103.351	107.729	94.099	110.577	85.608	100.972	105.062	92.593	87.040	100.246
1983	104.335	95.119	108.435	108.584	102.873	101.053	87.327	83.707	115.284	101.098	98.169	93.352	99.778
1984	99.625	88.980	106.777	118.363	99.709	99.836	108.087	80.646	103.334	115.055	98.193	78.247	99.738
1985	105.191	85.525	105.259	105.819	109.240	92.392	102.685	94.398	107.016	120.728	94.994	91.057	101.190
1986	100.001	85.911	93.472	97.828	108.128	91.506	106.813	107.438	105.150	117.422	88.607	109.793	101.006
1987	82.702	96.886	96.754	83.733	94.820	76.128	128.773	104.036	108.300	130.113	129.218	75.545	100.584
1988	80.469	36.668	67.059	51.749	263.396	290.065	136.771	83.178	70.155	130.849	140.152	74.549	118.755
1989	125.814	94.547	106.200	59.465	88.866	80.893	128.532	127.437	89.260	89.723	54.006	91.124	94.656
1990	95.968	126.254	118.795	43.941	56.372	157.512	118.018	87.155	104.926	101.407	120.595	58.474	99.118
1991	123.578	118.797	88.042	93.827	100.530	108.789	122.460	121.980	90.093	90.313	88.406	109.333	104.679
1992	111.700	97.148	78.191	56.725	107.694	126.306	104.129	122.832	82.425	.	.	.	98.572
Avg	104.101	94.348	104.133	87.436	111.135	116.710	112.234	98.225	96.180	108.663	98.266	88.035	

Total: 15558

Stable Seasonality Test

	Sum of Squares	Dgrs. of Freedom	Mean Square	F
Between Months	12545.776	11	1140.525	1.520
Error	105831.948	141	750.591	
Total	118377.724	152		

Probability of a Larger F is 0.1306

D10 Final Year	Seasonal JAN	Factors FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Avg
1980	99.780	98.599	112.325	106.145	109.306	96.658	105.157	87.304	100.525	102.170	90.303	91.885	100.013
1981	100.145	97.930	111.921	106.681	108.340	97.057	105.329	86.714	101.138	103.017	91.267	91.719	100.105
1982	100.606	96.258	111.196	107.328	106.862	96.565	105.954	86.136	102.277	105.789	92.709	91.410	100.258
1983	100.691	94.030	109.154	106.874	105.731	95.977	108.306	87.231	103.348	109.071	93.888	92.077	100.365
1984	100.321	92.179	106.284	104.795	104.290	93.919	107.697	89.922	104.833	113.404	97.275	92.287	100.601
1985	97.331	91.190	100.990	99.394	104.362	94.531	110.703	92.467	103.034	117.401	102.746	91.380	100.511
1986	97.378	91.204	96.903	91.347	103.801	93.825	115.487	96.742	99.894	119.127	108.774	89.507	100.333
1987	96.566	94.211	95.006	80.446	101.713	98.056	120.112	99.182	96.084	117.726	113.717	86.302	99.927
1988	99.120	99.290	95.226	69.968	98.138	101.632	123.654	102.851	94.167	113.118	118.181	84.381	99.810
1989	101.674	104.068	94.527	61.378	96.119	109.878	124.069	104.530	91.301	108.091	116.526	82.789	99.579
1990	107.494	107.125	94.723	56.551	94.825	113.707	122.331	109.106	90.296	102.694	113.767	83.849	99.706
1991	110.761	108.970	94.901	54.163	94.230	118.590	118.774	111.685	90.145	98.952	110.959	85.078	99.767
1992	112.377	110.830	96.317	53.528	92.478	119.639	116.469	112.739	91.643	.	.	.	100.669
Avg	101.911	98.914	101.498	84.508	101.553	102.310	114.003	97.431	97.591	109.213	104.009	88.555	

Total: 15318

D11 Final Year	Seasonally Adjusted Series JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
1980	456.002	360.045	356.111	368.364	419.923	456.806	381.334	461.605	327.281	401.293	444.059	468.063	4912
1981	463.328	455.429	662.967	488.371	378.438	410.068	454.765	416.310	403.410	436.823	381.298	419.762	5371
1982	387.652	460.221	446.960	416.480	442.629	433.904	470.959	453.936	456.602	465.076	474.601	460.560	5370
1983	512.458	514.731	522.198	544.569	552.348	618.896	497.621	596.122	705.396	592.275	673.143	655.973	6986
1984	643.931	627.039	663.908	734.770	620.386	691.021	655.540	592.738	664.867	702.796	719.608	623.054	7930
1985	815.884	734.733	838.696	876.312	877.711	832.527	801.245	897.617	933.671	948.036	872.050	957.541	10386
1986	1001	925.393	946.304	1037	980.725	872.900	789.785	840.375	711.754	594.323	444.040	616.710	9740
1987	402.835	454.301	417.869	386.595	307.729	227.421	280.572	242.988	227.927	186.025	147.735	79.952	3362
1988	47.417	13.093	15.752	12.863	45.854	55.101	25.070	22.362	25.487	48.622	61.112	52.145	424.877
1989	80.650	61.498	75.111	61.911	55.140	40.044	50.778	53.573	38.335	29.605	15.447	35.029	597.122
1990	27.909	37.340	40.117	24.757	18.982	45.732	33.516	29.329	45.406	40.898	46.586	33.394	423.965
1991	59.588	65.156	62.170	129.239	87.021	79.265	92.613	102.073	97.621	92.974	83.815	138.697	1090
1992	111.233	102.860	100.710	138.244	157.876	146.273	123.638	148.130	118.940	.	.	.	1148
Avg	385.395	370.141	395.298	401.475	380.366	378.443	356.726	373.628	365.900	378.229	363.625	378.490	

Total: 57740 Mean: 377.39 S.D.: 294.22

Instead of following the previously-described procedure, why not just run PROC X11 with the options CHARTS=NONE and PRINTOUT=NONE on the MONTHLY statement, and output the results [particularly the S-I Ratios (Table D8), the computed Seasonal Factors (Table D10), and the Seasonally Adjusted Series (Table D11)] to an output data set? Then, run PROC ANOVA against the S-I Ratios to perform a separate F-Test for the presence of stable seasonality. Use PROC PRINTTO to capture only the necessary details.

Here are the results from PROC ANOVA for the audit data:

ORIGINAL AUDITS COMPLETED BY COMPTROLLER'S OFFICE AUDITORS

Analysis of Variance Procedure
Class Level Information

Class	Levels	Values
MM	12	1 2 3 4 5 6 7 8 9 10 11 12

Number of observations in data set = 153

ORIGINAL AUDITS COMPLETED BY COMPTROLLER'S OFFICE AUDITORS

Analysis of Variance Procedure

Dependent Variable: SI_SALS

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	4825.01290293	438.63753663	5.50	0.0001
Error	141	11245.11999073	79.75262405		
Corrected Total	152	16070.13289366			
	R-Square	C.V.	Root MSE		SI_SALS Mean
	0.300247	8.920882	8.93043247		100.10705414

Source	DF	Anova SS	Mean Square	F Value	Pr > F
MM	11	4825.01290293	438.63753663	5.50	0.0001

ORIGINAL AUDITS COMPLETED BY COMPTROLLER'S OFFICE AUDITORS

Analysis of Variance Procedure

Dependent Variable: SI_FRAN

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	12545.77571511	1140.52506501	1.52	0.1306
Error	141	105831.94789265	750.58119073		
Corrected Total	152	118377.72360776			
	R-Square	C.V.	Root MSE		SI_FRAN Mean
	0.105981	26.94226	27.39673686		101.68687376

Source	DF	Anova SS	Mean Square	F Value	Pr > F
MM	11	12545.77571511	1140.52506501	1.52	0.1306

Finally, here is the code needed to accomplish the suggested procedure, and following it are the results which were produced from it:

```
***** F-TEST FOR EXISTENCE OF STABLE SEASONALITY *****;
DATA SEASA;
  SET SEAS;
  YY = INT(CYVMM/100);
  MM = CYVMM - 100*YY;

FILENAME PRTFILE 'USER.W30.MIS.TWIN504.OUTPUT' DISP=NEW;

PROC PRINTTO NEW PRINT=PRTFILE;
PROC ANOVA DATA=SEASA;
  CLASS MM;
  MODEL SI_SALS SI_FRAN = MM;
PROC PRINTTO;
RUN;

DATA SSTEEST(KEEP=OBJ PROB);
  INFILE PRTFILE LENGTH=Z;
  INPUT @;
  IF Z > 1;
  INPUT @11 D1 $ 9. @;
  IF D1='Dependent' THEN D0;
  INPUT D2 $ OBJ $
  //// D3 $ D4 D5 D6 D7 PROB;
  OUTPUT;
  END;

DATA SSTEEST2;
  SET SSTEEST;
  LENGTH TAX $ 9;
  IF OBJ = 'SI_SALS' THEN TAX = 'SALES';
  IF OBJ = 'SI_FRAN' THEN TAX = 'FRANCHISE';

PROC SORT;
  BY TAX;
DATA STABLE;
  SET SSTEEST2;
  BY TAX;
  IF FIRST.TAX;
  IF PROB < .01;
DATA NONSTABL;
  SET SSTEEST2;
  BY TAX;
  IF FIRST.TAX;
  IF PROB >= .01;

***** PRINT RESULTS OF SEASONALITY ANALYSIS *****;
PROC PRINT DATA=NONSTABL;
  VAR TAX PROB;
  TITLE1 'AUDITED TAXES FOR WHICH SEASONAL FACTORS WERE CALCULATED';
  TITLE2 'BUT WHERE EVIDENCE OF STABLE SEASONALITY IS LACKING';
  TITLE3 '(SIGNIFICANCE PROBABILITY ON F-STATISTIC EXCEEDS ONE PERCENT)';
  TITLE4 ;
PROC PRINT DATA=STABLE;
  VAR TAX PROB;
  TITLE1 'AUDITED TAXES FOR WHICH SEASONAL FACTORS WERE CALCULATED';
  TITLE2 'AND WHERE STABLE SEASONALITY IS PRESENT AT THE ONE PERCENT LEVEL';
  TITLE3 '(SIGNIFICANCE PROBABILITY ON F-STATISTIC LESS THAN ONE PERCENT)';
  TITLE4 ;
```

AUDITED TAXES FOR WHICH SEASONAL FACTORS WERE CALCULATED
 BUT WHERE EVIDENCE OF STABLE SEASONALITY IS LACKING
 (SIGNIFICANCE PROBABILITY ON F-STATISTIC EXCEEDS ONE PERCENT)

OBS	TAX	PROB
1	FRANCHISE	<u>0.1306</u>

AUDITED TAXES FOR WHICH SEASONAL FACTORS WERE CALCULATED
 AND WHERE STABLE SEASONALITY IS PRESENT AT THE ONE PERCENT LEVEL
 (SIGNIFICANCE PROBABILITY ON F-STATISTIC LESS THAN ONE PERCENT)

OBS	TAX	PROB
1	SALES	<u>.0001</u>

References

Chapter 28, SAS Procedures Guide, Version 6, Third Edition.

Chapter 22, SAS Language and Procedures, Usage, Version 6, First Edition.