

## STEP-BY-STEP NETWORK SWITCHING PERFORMANCE MEASUREMENT PLAN

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**NOTICE**

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**1. GENERAL**

**1.01** This Plan addresses switching performance measurements for Step-by-Step Switching Systems. It is limited to those offices which perform an end office function (including end offices which are used partially as tandem switchers).

**1.02** Whenever this section is reissued, the reason for reissue will be listed in this paragraph.

**1.03** The measured components and the performance indicators included in this Plan are those for which network maintenance, administrative, and design engineering forces are primarily responsible. These components and indicators are sufficiently sensitive to reflect changes in switching performance quality caused by maintenance, administrative, and provisioning conditions.

**1.04** Generally, the switching performance of a particular office is related to how well the network/maintenance, network/administration, and network/design engineering team is managed and how effectively they work together. One would expect that periodic short term situations may occur due to conditions beyond the control of the team (eg, extreme weather conditions, other acts of nature, severe equipment or facility failures external to the particular switching machine) that would adversely affect service. The continuing performance levels are the responsibility of the team.

**1.05** The weighting of the components and categories is necessarily judgmental. The following considerations were applied:

- (a) Impact of failure on customer
- (b) Relative magnitude of investment in the portion of switching machine being measured

- (c) Relative magnitude of effort to maintain and administer

- (d) Impact on revenue.

**1.06** Since the level of performance of the SXS unit is the result of equipment maintenance, equipment administration, and provisioning, the results under the Plan are to a great extent a consequence of the management effort. The degree of cooperation, joint effort, and acceptance of joint responsibility will be evident in the result obtained.

**2. OUTLINE**

**2.01** This Plan is structured to measure overall end office switching performance as it affects the customer. Therefore, the most pertinent available aspects have been included as measured components. The components are then combined into four categories. The four categories combine to form the switching index.

**2.02** The four categories are:

- (a) Machine Access
- (b) Machine Switching
- (c) Billing
- (d) Customer Reports.

The components of (a), (b), and (c) are technical measurements designed to measure different aspects of service within the broad category. Category (d) is an external view of service by the customer.

**2.03** In addition to the measured components upon which the index is based, the Plan also calls for recording certain measurement items entitled performance indicators. These performance indicators are included for one or more of the following four reasons:

- (a) Indicators that assist in analyzing the cause of poor service as shown by a measured component
- (b) Indicators that measure aspects of service failure beyond the scope of the measured components

(c) Indicators which are not universally available in all entities or in all data gathering systems, but which may in the future with increasing availability become measured components

(d) Indicators which identify potential service failure.

**2.04** The Plan includes two types of results reports; a detailed results report for use as the SXS unit report, and a results summary for upper levels of management. It is not the intent of this Plan to designate at which level of management the detailed results report should stop. One would expect that severity of service problems and styles of management would decide. The detailed report is designed for single office (SXS unit) reporting and should be limited to that use. The management summary is to be used to consolidate two or more single entity reports to any management level desired and for any time period of one to twelve months.

**2.05** The summary report employs a results banding technique in which performance levels are grouped into four bands for each component of the Plan and for the overall index.

**MEANING**

Band A — 98.0-100	Excellent (or super-excellent) performance attainable only by very good work and/or very favorable conditions. For certain components this may be at or close to uneconomical operating levels.
Band B — 96.0-97.9	Fully satisfactory and economical performance range.
Band C — 90.0-95.9	Fair to mediocre performance.
Band D — Less than 90.0	Ranging from weak to definitely unsatisfactory performance.

The form also provides for the entry of trend data for Band D either in terms of actual results for a single office, or the number and percent of total offices within the echelon which have experienced Band D performance within each component and/or the overall index.

**2.06** The two-page summary report also provides upper management with two additional summaries:

(a) The number of SXS units which are beyond the threshold level in each performance indicator.

(b) A listing of offices experiencing Band D performance during the period covered by the report. A specific entry is required for each Band D office for each monthly report period. That entry will show the name of the office, the number of times in the previous twelve monthly report periods that this office has experienced Band D performance, and the index level of each Band D component for the report period.

**3. LIMITATIONS**

**3.01** The Plan is fundamental in nature and intended to provide a general measurement of improving or deteriorating service. It is not intended to be and should not be regarded as a personnel evaluation plan or a panacea for improving performance in switching environments. Proper application of this Plan will assist management in identifying engineering, administration, and maintenance problems. Correction of these problems can only be accomplished through intelligent management action.

**3.02** Although some machine switching and billing functions are included in the component descriptions, there is no intent to provide complete descriptions of SXS operation. Full description is included in Division D of the Traffic Facilities Practices and Division H, Section 2B(1) of the Dial Facilities Management Practice.

**3.03** This Plan calls for the use of measured components and performance indicators. These items have been selected to serve several purposes. Some will be useful to local managers in predicting and/or in analyzing potential and actual areas of service difficulty. Some are indicative

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of conditions which may be related to service-affecting problems other than in the measured office. Still others will reflect problems affecting revenue. Some of these indicators have direct impact upon the quality of customer service; others are indirectly related. All of the numerous indicators necessary to provide complete and detailed analysis of switching performance quality have not been included. Those selected are considered among the most important. They were carefully selected as those which require constant monitoring and management attention.

**3.04** There are many other indicators useful to managers in the detection of adverse service conditions or trends. They should be used in addition to those contained in the Plan in the continuing identification and analysis of potential and actual trouble spots within the office.

**3.05** Other indicators which are less representative of service, yet are related to the troubles, problems, or conditions affecting service, are available and must be used. These other indicators may sometimes prove to be more important than the indicators of this Plan. If these supplemental indicators are neglected, managers may be unaware of impending service deterioration until results worsen. The proper approach is to be sensitive to these other indicators.

**3.06** The following is a list of items not directly measured by the Plan. These items are certainly indicative of the service provided by the SXS unit and require constant attention. The list is not all inclusive.

- (a) PS tracer use
- (b) Call block alarms
- (c) Release alarms
- (d) Call-thru testing
- (e) Line concentrator performance
- (f) Cleanliness of the office
- (g) Preventive maintenance backlog
- (h) Coin alarms
- (i) Percent of engineered capacity

(j) Data validation

(k) Class of service balance

(l) Proper use of administrative, maintenance, and provisioning methods and procedures

(m) Individual component busy hour performance.

**3.07** Although the administrative data requirements of this Plan are restricted to busy hour periods, it is strongly recommended that network administrative personnel exercise judgment in obtaining and analyzing other hours and, where warranted, total day periods. Since some measured components and performance indicators relate average monthly performance for the total office or specific equipment items, continued analysis of equipment subgroups to identify trouble hotspots is recommended.

**3.08** This Plan will be modified as more precise measurements of switching performance become available and improved data gathering techniques become standard.

## 4. OBJECTIVE

**4.01** This Plan is designed to provide a measurement of the quality of service provided by an SXS unit. It is also designed to reflect the quality of the administrative, maintenance, and design/provisioning efforts which relate to the measured service quality.

**4.02** In each of the four major categories—Machine Access, Machine Switching, Billing, and Customer Reports—both measured components and performance indicators have been included. The measurements provide sufficiently sensitive reflections of the quality of service to the using customer. Performance indicators are designed to assist administrative, maintenance, and engineering personnel charged with the responsibility for that service quality in predicting and/or in analyzing areas of service concern related to switching machine performance, and when required, in developing joint programs for corrective action.

**4.03** Generally, the performance of an SXS unit is related to the quality of the administrative, maintenance, and engineering efforts brought jointly to bear on that unit. This plan is designed to measure the service quality resulting from those efforts and to indicate the necessity of joint

involvement by personnel charged with the different primary functional responsibilities.

## 5. INTERPRETATION AND USE OF RESULTS

**5.01** The objective of the measured components of the Plan is to represent actual failures of the machine to properly complete a call or to provide accurate billing information. The performance indicators represent conditions which may seriously impact upon the machine's ability to perform its switching and billing functions satisfactorily.

**5.02** The measured components and performance indicators in this Plan are of several different types. Some measurements are obtained from machine counts of failures caused by equipment malfunction. Another type of measurement addresses blockage and delay experienced on equipment items which are engineered on a probability basis. With this type, it is expected and economic that a certain level of machine counts will be observed. The index levels and observation periods are designed to reflect this expected level of event occurrences. The customer trouble report category reflects central office, line equipment, and facility conditions that caused the customer to report a service failure.

**5.03** Switching performance, as measured by this Plan, is strongly dependent on the control of equipment failure rates, the availability of equipment for service, the administration of the available equipment, and the quality of work. There are few inherent reasons why the performance of an individual office, especially over long periods, should be appreciably different than the average performance of large groups of offices.

**5.04** Index levels obtained through the use of this Plan are not comparable to index levels in other types of switching machines under other measurement plans. The index tables used in this Plan are based on a scientific sample of SXS offices throughout the System. Therefore, the service provided by a given SXS office can only be compared to other SXS offices.

**5.05** Performance indicator threshold levels have been established at a point considered to be generally valid on a broad basis throughout the System. There may be instances where this level is inappropriate for a particular SXS unit. In those instances, more stringent thresholds may be established for local management purposes. However,

for System reporting of results, the threshold levels contained in the Plan should be used.

**5.06** Management should pay particular attention to the trend of office results in the various components and performance indicators of the Plan. Improvement in the performance of any one item should be directly related to the corrective action taken. This point is significant not only in evaluating the performance of an office but also in evaluating a particular course of action as being worth the required effort and cost in view of the results improvement. Worsening results indicate the need for a stepped-up pace or different tack in pursuing corrective action.

**5.07** Objectives should be established in such a manner that they are meaningful to and attainable by the managers involved in accomplishing the goals. For this reason, managers responsible for the maintenance, administration, and provisioning should be involved in the setting of objectives. An understanding of the interrelationship of the various functions in attaining overall satisfactory service levels is essential. The Plan is designed to foster this understanding.

**5.08** While it may be argued that responsibility for the measured components of this Plan should be assigned to functional groups who can exclusively control their performance, examination of the causes of any component failure reveals that such sterile isolation is impossible. It is the intent of this Plan that the interdependency of service on functional group contribution be recognized. In other words, the network maintenance, network administration, and network design/provisioning functional groups are equally responsible and should be held equally accountable for analysis and for concerted corrective action.

**5.09** The use of this measurement Plan is not an adequate substitute for intelligent management. Continuous diagnostic analysis must be employed to assure problem correction prior to service deterioration.

## 6. GENERAL INSTRUCTIONS

**6.01** The service month to be used for this Plan will be from the 23rd of the month preceding the report month through the 22nd of the report month (eg, April report month begins March 23rd and ends April 22nd).

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**6.02** Most of the data required for this Plan are obtained from administrative and maintenance registers. Actual peg counts or mechanized data printouts shall be used. Expanded figures calculated from sample peg count data are not permitted. The expected error in using an expanded sample is more than is considered allowable for this Plan.

**6.03** All register readings needed for this Plan shall be taken in as short a time as possible. Interruptions in the job of reading registers shall be avoided. This requirement is intended to minimize distortion of results due to mismatch of data which are related in performance ratios to one another.

**6.04** It is important that readings of both maintenance and administrative registers be taken as near as possible to the beginning of the report month. Where these are read by different forces, a coordinated effort is required.

**6.05** If the day of the report month falls on a day when a person qualified to read and record the registers is not scheduled to work in the office, these readings shall be taken at the time calculated to most closely approximate the report month. In no case shall the deviation be greater than plus or minus three calendar days from midnight of the first day of the report month. Thus, a period of six days is available within which register readings may be obtained.

**6.06** Register readings taken at the beginning of one month shall be used for the end of the previous report month. There shall be no break in the register data between consecutive reporting periods.

**6.07** Registers used in this Plan shall not be prevented from operating normally, and readings of such registers shall not be adjusted or changed either electrically or mechanically. When a register or its associated circuit used in the Plan fails to operate properly, the condition shall be repaired promptly and an entry shall be made in the remarks space of Form E-6424A (Fig. 1) for that report period, such as "OPF register replaced."

**6.08** Performance for those components and indicators which measure trouble conditions and customer reaction will be measured 24 hours a day for every day of the year. For those components and indicators which are design related

and load sensitive, individually determined busy hour data will be reported in accordance with the material included in Part 7, Description of Components.

**6.09** Procedures for determining and changing busy hour periods shall be in accord with instructions in the TSOP, Division F, Section 2B. The determination of busy hour periods shall be the responsibility of the network administration group.

**6.10** Although it is possible to score plant registers while conducting maintenance operations, the effort that would be required to validate test deductions is substantial. While it is recognized that register scores due to test calls may affect the results of a small SXS unit, it does not justify test deductions for the majority of central offices involved in the Plan since routine test call failures were included in the statistics used for measurement table and threshold development. An explanatory note in the remarks space of Form E-6424A shall be made for those SXS units where test calls may have adversely influenced the results. The register scores resulting from test calls shall not be discounted except as outlined in this section.

**6.11** Deductions may be made when testing register circuits for audit purposes. Details of the register audit must be signed by the auditor and attached to Form E-6424A.

**6.12** An exception to the no-discounts rule is applicable to failures on tests made in connection with the installation, modification, or rearrangement of central office equipment by installation forces (Western Electric Company or equivalent) when the following conditions are met:

- (a) The testing is in connection with work being performed as covered by a specific authorization (eg, MOP, routine order or estimate, etc).
- (b) The failures registered as a result of the testing are not service affecting.
- (c) The validity of the test is documented by having written certification attested to by the Central Office Supervisor, the Dial Administrator, and the Western Electric Company Supervisor. Form E-6429 (Fig. 3) will be submitted with the associated Form E-6424A.

**6.13** Rules for the inclusion (or exclusion) of administrative data, for the treatment of holiday data, and for the documentation of out-of-order conditions are as stated in the TSOP, Division F, Section 2B. Generally stated, these rules provide for the inclusion of all valid data for five business days each week during the report period regardless of the local conditions (eg, storms, civil disturbances, impaired switching facilities, installation, or rearrangement activity). The only periods that may be excluded are those during which data are proven to be unavailable or inaccurate. Written documentation of these conditions, jointly signed by administrative and maintenance personnel, is a requirement of this Plan.

**6.14** The components and indicators for which data are obtained for "busy hour" measurements require a minimum of 15 days' valid busy hour data for each report month.

**6.15** The following data requirements will apply for the components and indicators which are measured 24 hours per day.

(a) If a failure count or base data count is lost or invalid (eg, outpulser failures did not score for two days), the base data or failure count used to calculate that component or indicator must be excluded for the same time period.

(b) Lost or invalid data normally obtained from mechanical peg count registers may not exceed eight calendar days during the report period for any component or indicator. A day's data (normally 24 hours) will be considered valid if all peg counts between the hours of 0800 and 2400 are obtained.

(c) Data obtained from data gathering systems must contain valid data for 85 percent of the 1/2 hour data blocks for the measured month for any component or indicator.

**6.16** If due to malfunction or error, results data for a measured component or a performance indicator are not available as defined in 6.14 and 6.15, NA shall be entered in the performance column of Form E-6424A. NA is considered Band D or soft spot performance and will be reported as such on the SXS unit report (E-6424A) and Form E-6424B (Fig. 2).

**6.17** The notations NE (not equipped) or NP (not provided) shall be entered in the (1) performance and (2) soft spot or band columns of Form E-6424A.

NE—Feature or option not installed

NP—Data not furnished by non-network department.

NE or NP is *not* considered Band D or soft spot performance.

**6.18** All register readings taken by maintenance personnel shall be recorded on Form E-4744, Register Readings, or equivalent. Forms for the recording of administrative register readings shall be developed and prepared as locally required. Forms to be used for the compilation of register reading data and for the computation of applicable percentages and component indices shall also be developed and prepared locally except as prescribed in the detailed instructions.

**6.19** Offices having more than one busy hour in which a performance indicator is to be calculated must compute the performance separately for each busy hour. The results reported on Form E-6424A must be the lowest of the calculated values or poorest performance.

**Example:** The all originating registers busy indicator is measured during the dial tone speed busy hour. If the office has two dial tone speed busy hours, all originating registers busy must be measured during each busy hour separately. The data for the hour with the poorest performance must be reported on Form E-6424A.

**6.20** In offices sharing ANI equipment, the ANI results will be reported by each entity in the building.

**6.21** Because of the importance of both measured components and performance indicators to the valid evaluation of the service rendered by the measured office, the District Manager must assume responsibility for the validity and integrity of the data reported.

**6.22** All forms, both standard and locally developed, used in the preparation of results data reported on Forms E-6424A and E-6424B shall be

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retained for at least one year. It is recommended that a retention system similar to that described in Section 226-001-010, Step-by-Step Switching Systems Controlled Maintenance Plan, be used. All forms, records, trouble tickets, and administrative data sheets should be filed in the appropriate month's folder and retained until the results report for the same month of the following year replaces them. Exceptions to this rule are contained in Part 7, Description of Components.

**6.23** Each SXS entity will prepare one report, Form E-6424A, monthly.

**6.24** Each Area and Company will prepare a monthly, quarterly, and annual summary report, Form E-6424B.

**6.25** One copy of Area and Company summary reports, Form E-6424B, shall be forwarded to the following address to arrive no later than the last day of the month following the report month (eg, the 4th quarter, annual, and December reports are due January 31).

Results Compilation  
American Telephone and Telegraph Company  
295 N. Maple Avenue  
Room 1202M3  
Basking Ridge, New Jersey 07920

**6.26** Procedures for the summarization and forwarding of intracompany reports shall be locally prescribed.

**6.27** Ordering information for Forms E-6424A, E-6424B, and E-6429 is as follows:

Forms must be ordered on a regular requisition from your local Western Electric Service Center. Forms should be ordered individually (on an "each" basis) in quantities that are multiples of the standard package as shown below.

ORDER WORDING	STANDARD PACKAGING
(Qty) E-6424A	25/Pad; 2 Pad/Pk.
(Qty) E-6424B	25/Pad; 2 Pad/Pk.
(Qty) E-6429	25/Pad; 2 Pad/Pk.

**7. DESCRIPTION OF COMPONENTS**

**7.01** This part of the Plan describes the performance indicators and measured components to be reported on Form E-6424A. Included are brief descriptions of the components, the sources of the data to be gathered, the computation methods to be employed in preparing data for reporting at the SXS unit level, and the applicable time periods for which data are to be gathered and summarized. Sections will also include references to report forms and to detailed reference material which may serve to further describe data gathering equipment.

**PERFORMANCE INDICATORS**

**MACHINE ACCESS**

**All Line Finders Busy**

**7.02** A bid for dial tone in an SXS unit encountering an "all finders busy" condition due to service busies, permanent signals, or maintenance busies, is denied dial tone until a line finder is idled. An all finders busy register will score each time all line finders in a group become busy. These scorings are good indicators of changing load requirements and possible dial tone speed problems.

**7.03** The monthly results are computed as follows:

- (a) Enter the total month's (24 hours per day) all finders busy (AFB) scorings in column A of Form E-6424A.
- (b) Enter the number of working lines in column D.
- (c) Enter the number of AFB's per working line in column E (A/D=E).

**All Originating Registers Busy**

**7.04** When all originating registers in a subgroup are busy, the all-register-busy (ARB) register will be scored. This indicator can be used as a predictor of poor dial tone speed service and as a tool in analyzing poor service.

**7.05** The monthly results are computed as follows:

- (a) Enter the month's total ARB scorings for the dial tone speed busy hour in column A of Form E-6424A.

**Note:** See 6.19 in the general section for treatment of multicomponent busy hours.

- (b) Enter the month's total originating register peg count (DP and TT) for the dial tone speed busy hour in column D.
- (c) Divide column A by column D and enter the result, expressed as a percent, in column E ( $A/D \times 100 = E$ ).

#### Last Trunk Usage

**7.06** This performance indicator is included to indicate incoming traffic congestion problems. This is accomplished by monitoring the CCS load carried on the last choice trunk of each subgroup accessed by the incoming selectors. Connection to the traffic usage recorder (TUR) or a portable TUR is required. Last trunk usage (LTU), **if reported**, must be measured for at least five business days during the time consistent level busy hour. This hour can be determined by collecting data in several candidate hours during a study period and then choosing a time-consistent hour in which the total LTU for the hour is greatest. Additional details are contained in DFMP, Division H, Section 2d(10).

**7.07** The monthly results are reported as follows:

- (a) Compute the average busy hour last trunk usage CCS for each subgroup (total subgroup CCS divided by the number of measured hours).
- (b) Enter the number of subgroups which exceeded 2 percent average blockage in column E of Form E-6424A.

#### MACHINE SWITCHING

##### Trunk Outage

**7.08** Trunk outage is defined as a trunk not available for customer or operator access. This outage is expressed as the average normal business day outage hours per trunk per month and includes those trunks for which the office is designated control or assigned office as covered in Section 660-400-010.

**7.09** The source for trunk outage information is the Trunk Service Results Plan, Section 660-400-010.

**7.10** Enter the trunk service index for the report month as reflected on Form E-3994 in column E of Form E-6424A.

#### Final Trunk Groups Over 3 Percent NC

**7.11** One principal System method for evaluating the adequacy of the trunk provisioning process is the Monthly Trunk Service Report as described in GL 72-06-185. As one contributor to the office overflow, final trunk group overflows must be carefully monitored by network administrative, maintenance and provisioning personnel. The Monthly Trunk Service Report shows, by trunk group category; Intertoll, Toll Access—Operator, Toll Access—Machine, Toll Completing, Intertoll and Auxiliary, the percentages of trunk groups blocking at 3.1 percent or more. For purposes of this Plan, the total Final Trunk Groups over 3.0 percent NC will be reported as a performance indicator. This indicator, used in conjunction with the figures for Trunk Outage, will provide network personnel with an aid in analyzing office performance. All efforts to obtain current month's data should be employed. If current month's data are not obtainable, submit the most current available data.

**7.12** The monthly results are reported as follows:

- (a) Enter the number of controlled measured trunk groups (for which valid measurements have been obtained during the report period) which are in the 3.1 percent or greater NC band in column E of Form E-6424A. Definitions of "measured groups," "valid measurements," and of the "3.1 percent or greater NC band" are included in GL 72-06-185, New Monthly Trunk Service Report.

#### Load Balance Index

**7.13** The assignment of customers' lines in SXS units can have a distinct impact upon the quality of service rendered. The total traffic load carried by the line finder groups and the balanced application of that load bear upon the quality of dial tone and originating service provided. The Load Balance Index Plan will be the measurement provided to indicate trends, identify superior performance, and point up opportunities for improvement in load balance administration of dial central office line equipment. Division A of the Dial Facilities Management Practice contains

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instructions regarding load balance indexing. Division H outlines load balance procedures.

**7.14** Enter the monthly load balance index as reflected on Form E-6402, Load Balance Index (traffic unit report) in column E of Form E-6424A.

### Switch Outage

**7.15** Switching equipment is provided to carry an estimated number of calls in the busy hours of the busy season at objective levels of service. When equipment is removed from service, the capacity available to handle traffic is reduced. As the call load reaches and exceeds the capacity of the reduced amount of equipment, calls are blocked or delayed. This indicator is a count of switch outage hours during the normal business day (NBD). Included are line switches, line-finders/first selectors, trunk finders, rotary out trunk selectors, and all other selectors and connectors.

**7.16** Methods and details for recording and administering equipment outages are described in Section 201-114-001. For the purpose of determining outage time of equipment, the instructions contained in Section 201-114-001, Record of Equipment Out of Service, will be used, and only outages occurring during the hours of the normal business day (NBD) shall be counted. The normal business day is defined as follows:

(a) Regular NBD includes the period from 0900 to 2200 hours local time on weekdays (excluding Saturdays and Sundays).

(b) Abbreviated NBD includes the period from 0900 to 1800 hours local time on weekdays (excluding Saturdays and Sundays).

Outages occurring on weekdays, which are also Telephone Company recognized holidays, are excluded from measurement under the outage plan.

**7.17** NBD outage hours for the above switches are recorded on Form E-4256, Record of Equipment Outages.

**7.18** The monthly results are computed as follows:

(a) Total the NBD hours logged on Form E-4256 (NBD Outage—Plant) for the listed switches and enter in column A of Form E-6424A.

(b) Enter the total number of line switches, line-finders/first selectors, trunk finders, rotary out trunk selectors, and all other selectors and connectors installed in the reporting SXS unit, in column D.

(c) Divide column A by column D and enter the result in column E. ( $A/D = E$ ).

### Common Equipment Outage

**7.19** This indicator is a count of outage hours during the normal business day (NBD) of items of equipment considered common to all customers such as ANI equipment and TOUCH-TONE® calling equipment. Included are pulse generators, outpulsers, identifiers, senders, transverters, recorders, call identity indexers, originating registers, translators, TOUCH-TONE dial tone supply, and foreign area translators. Methods and details for recording and administering equipment outages are described in Section 201-114-001. For the purpose of determining outage time of equipment, the instructions contained in Section 201-114-001, Record of Equipment Out of Service, will be used and only outages occurring during the hours of the normal business day (NBD) shall be counted. The normal business day is defined as follows:

(a) Regular NBD includes the period from 0900 to 2200 local time on weekdays (excluding Saturdays and Sundays).

(b) Abbreviated NBD includes the period from 0900 to 1800 local time on weekdays (excluding Saturdays and Sundays).

Outages occurring on weekdays, which are also Telephone Company recognized holidays, are excluded from measurement under the outage plan.

**7.20** Monthly results are computed as follows:

(a) Enter the total NBD outage hours for all common equipment as logged on Form E-4256 (NBD Outage—Plant) in column A.

(b) Enter the total number of all common equipment items (outpulsers, identifiers, originating registers, etc) in column D.

(c) Divide column A by column D and enter the outage hours per equipment item in column E ( $A/D = E$ ).

**BILLING****ANI/SAMA Identifier First Trial Failures**

**7.21** Certain conditions in office switching including equipment trouble may interfere with the identification functions. This may result in the failure to identify one or more digits of the calling number. When this occurs, the first trial identifier failure (1TF) register is scored. A second trial is made in offices with more than one identifier. Accordingly, first trial failures are included as an indicator of billing service.

**Note:** Automatic Number Announcement Circuit (ANAC) caused Identifier failures are deductible. The trouble tickets identified by the ANAC trunk number must be retained for 3 months for audit purposes.

**7.22** The monthly results are computed as follows:

- (a) Enter the month's total identifier first trial failures in column A of Form E-6424A.
- (b) Enter deductions as authorized by Form E-6429 in column B.
- (c) Subtract column B from A and enter net failures in column C.
- (d) Enter the month's total ANI outpulser or SAMA identifier peg count, in terms of 10,000, in column D.
- (e) Divide column C by column D and enter the result in column E ( $A-B/D = E$ ).

**Transverter First Trial Failures**

**7.23** Transverter first trial failures (TTR) are included as a performance indicator to provide maintenance personnel with a means of detecting and predicting ineffective attempts due to transverter second trial failures.

**Note:** Automatic Number Announcement Circuit (ANAC) caused transverter first trial failures as recorded on the ANA-DNK register are deductible.

**7.24** The monthly results are computed as follows:

- (a) Enter the total month's transverter first trial failures (TTR) in column A of Form E-6424A.
- (b) Enter ANAC failures plus authorized deductions from Form E-6429 in column B.
- (c) Subtract column B from column A and enter the net failures in column C.
- (d) Enter the total month's transverter peg count (TVPC), in terms of 10,000, in column D.
- (e) Divide column C by column D and enter the result in column E  $[(A-B)/D=E]$ .

**Bulk Billed Free**

**7.25** In the event of a transverter second trial failure, the customer is given a reorder signal if the call requires detailed billing. If the call which failed on a second trial is bulk billed, the customer is given the call free. In this case a second register, bulk billed free (BBF), is also scored by the transverter. A significant loss of revenue may occur if a high volume of calls are allowed to complete on this basis. For this reason, bulk billed free registrations are included as a performance indicator and should be monitored to detect problems.

**7.26** The monthly results are computed as follows:

- (a) Enter the total month's bulk billed free registrations in column A of Form E-6424A.
- (b) Enter deductions authorized by Form E-6429 in column B.
- (c) Subtract column B from column A and enter the net failures in column C.
- (d) Enter the total month's transverter peg count, in terms of 10,000, in column D.
- (e) Divide column C by column D and enter the result in column E  $[(A-B)/D=E]$ .

**CUSTOMER REPORTS****Customer Trouble Reports, Code 7**

**7.27** Code 7 reports (Test OKs) are included in this Plan as a performance indicator. Because these reports reflect trouble conditions in the entire network from end to end, they may be reflective of conditions other than those directly relatable to the measured office. In addition, because they may reflect conditions due to excessive temporary load, they can serve administrative, maintenance, and provisioning personnel with broad indications of service from the customer's viewpoint. The monitoring of trends and the use of analytical information derived from these reports will assist in developing joint programs of corrective action. *Constant analysis of customer reports is essential in SXS offices.*

**7.28** The monthly results are computed as follows:

- (a) Enter the month's total Code 7 Customer Reports in column A of Form E-6424A.
- (b) Enter a total count of working main stations plus equivalent main stations, as of the first day of the report month, in terms of 100, in column D. Average main stations must be used if a change of more than 500 main stations occurs during the report month.
- (c) Divide column A by column D and enter the result in column E ( $A/D = E$ ).

**MEASURED COMPONENTS****MACHINE ACCESS****Dial Tone Speed**

**7.29** Automatic dial tone speed measuring equipment is used to determine the incidents of dial tone delays over three seconds. The primary purpose of the dial tone speed equipment is to provide overall dial tone speed data for the SXS entity and for each loading division (where more than one is provided). These data are used to evaluate customer service and are directly related to the design, provisioning, and loading of Step-by-Step equipment in the dial tone switching path. When used in light traffic periods, dial tone speed equipment will detect delays caused by equipment trouble.

**7.30** Detailed descriptions of automatic dial tone speed equipment for use in Step-by-Step offices are included in TSOP, Division F, Section 2B, Item 2, and Section 951-901-100. Procedures for the assignment of test lines to automatic dial tone speed equipment are contained in TSOP, Division F, Section 2B, Item 3.

**7.31** Dial tone speed results will be compiled on Form E-4372 (and E-5575 where summarization is mechanized) in accord with the instructions included in TSOP, Division F, Section 2B.

**7.32** Enter the month's total adjusted index points earned (Item 27) from Form E-4372 in column M of Form E-6424A.

**Equipment Irregularities**

**7.33** This component is measured by service observations. It is a percent of observations classified as "wrong number reached," "misdirected," "no ring," and "other equipment irregularities." These classifications are defined in TSOP, Division B, Section 1C. This component is used to determine how effectively the SXS subscriber is served in the completion of calls.

**7.34** The monthly results are computed as follows:

- (a) In column H of Form E-6424A, enter the total number of service observed equipment irregularities charged to the SXS entity during the continuous three-month period ending coincident with the end of the report period.
- (b) In column L, enter the total number of local dial line service observations made on the SXS entity during the continuous three-month period ending coincident with the end of the report period.
- (c) Divide column H by column L and enter the result, expressed as a percent, in column M ( $H/L \times 100 = M$ ).

**Overflow—Percent RO/NC**

**7.35** This measurement is the percentage of service observed calls which routed to RO/NC. A detailed description of this component is in TSOP, Division B.

**7.36** The monthly results are computed as follows:

- (a) Enter the total number of service observed overflows charged to the SXS entity during the continuous three-month period ending coincident with the end of the report period in column H of Form E-6424A.
- (b) Enter the total number of local dial line service observations made on the SXS unit during the continuous three-month period ending coincident with the end of the report period in column L.
- (c) Divide column H by column L and enter the result, expressed as a percent, in column M ( $H/L \times 100 = M$ ).

#### BILLING

##### ANI Outpulser Failures

**7.37** ANI outpulsers receive the calling customer's number from the identifier and convert this to multifrequency pulses which it sends over the ANI trunk to the CAMA office. This furnishes the necessary information for the initial entry on the AMA tape at the CAMA office. When an outpulser encounters a failure other than a failure by the identifier, the trouble is recorded by the trouble ticketer, if provided, and the outpulser failure register is scored. The call will be handled by the CAMA operator for verbal identification.

**7.38** The monthly results are computed as follows:

- (a) Enter the month's total ANI outpulser failures in column H of Form E-6424A.
- (b) Enter deductions as authorized by Form E-6429 in column J.
- (c) Subtract column J from column H and enter the net failures in column K.
- (d) Enter the month's total ANI outpulser peg count, in terms of 10,000, in column L.
- (e) Divide column K by column L and enter the result in column M [ $(H-J)/L = M$ ].

##### SAMA Transverter Second Trial Failures

**7.39** When a noncoin Step-by-Step customer dials a call requiring machine billing, the necessary information is passed from the Step-by-Step Automatic Message Accounting (SAMA) equipment to a transverter which is part of the AMA system. The transverter controls the recording of billing information on paper tape. Up to three separate entries are put on the tape for completed calls. The initial entry consists of several lines which, on detail billed calls, identify the calling customer, called telephone, the billing index, and other required information. When the called telephone is answered, an entry is put on the tape which identifies the call and records the time conversation started. When the call is completed, another entry is put on the tape which identifies the call and records the time the call ended.

**7.40** If a transverter fails on a call, it causes a trouble recorder card to be produced, scores its first trial failure plant register (TTR), and disconnects from the equipment serving the call. The serving equipment immediately resubmits the demand to the group of transverters as a second attempt. A different transverter is preferred on the second attempt. If this attempt fails, the transverter produces a trouble card record of the failure and scores the second trial failure plant register (TST). If the call is to a toll point, the customer is given a reorder signal. If the call which failed on second trial is to a nontoll point, the customer is given the call free. In this case a second register, bulk billed free (BBF), is also scored by the transverter. Transverter second trial failures, which result in the customer getting recorder, are a measured component of the Plan.

**Note:** Automatic Number Announcement Circuit (ANAC) caused transverter second trial failures as recorded on the ANA-DNK register are deductible.

**7.41** The monthly results are computed as follows:

- (a) Enter the total month's transverter second trial failures in column H of Form E-6424A.
- (b) Enter the total ANAC failures plus deductions authorized by Form E-6429 in column J.
- (c) Subtract column J from column H and enter the net failures in column K.

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- (d) Enter the total transverter peg count (TVPC), in terms of 10,000, in column L.
- (e) Divide column K by column L and enter the result in column M [(H-J)/L=M].

### ANI Outpulser Seizure Failures

**7.42** ANI trunks are arranged to score a register (OSF) whenever they fail to seize an outpulser during the prescribed timing interval. Although the call is allowed to complete, operator expense is incurred as a result of the blockage.

**7.43** The monthly results are computed as follows:

- (a) Enter the OSF count for the month in column H of Form E-6424A.
- (b) Enter deductions as authorized by Form E-6429 in column J.
- (c) Subtract column J from H and enter the net failures in column K.
- (d) Enter the month's total ANI outpulser peg count, plus the OSF count, in terms of 10,000, in column L.
- (e) Divide column H by column L and enter the result in column M [(H-J)/L = M].

### SAMA Recorder Failures

**7.44** AMA recorders produce the punched paper record of calls for which customers are to be billed. An initial entry failure causes a transverter second trial. When an AMA recorder fails to record the subsequent transactions properly on the AMA tape, it scores the AMA recorder trouble record register (RTR) and connects to the trouble recorder to produce a trouble record of the equipment used and information associated with the call in progress. When AMA recorders fail, there is no second trial and the call is completed. Billing information incorrectly recorded on the tape may or may not be in such condition as to be billed properly. Recorder failures may cause stoppages to occur in the accounting center billing process or may be the cause of lost revenue.

**7.45** The monthly results are computed as follows:

- (a) Enter the total month's AMA recorder failures in column H of Form E-6424A.
- (b) Enter deductions as authorized by Form E-6429 in column J.
- (c) Subtract column J from column H and enter the net failures in column K.
- (d) Enter the total month's transverter peg count (TVPC), in terms of 10,000, in column L.
- (e) Divide column K by column L and enter the result in column M [(H-J)/L=M].

### ANI Identifier Second Trial Failures

**7.46** ANI identifiers function with other equipment in SXS offices to provide automatic number identification (ANI). This is accomplished by using a 5.8 Hertz signal on the sleeve of the outgoing trunk, which is connected through the originating office switches, to the sleeve of the customer's line. Each customer's line has cross-connections on a number network frame. The 5.8 Hertz signal through this number network enables the identifier to record the calling customer's number. If the identifier encounters trouble in identifying one or more digits of the calling number, it will make a retest. Should the identifier be unable to make an identification in two tries, a trouble record is made by the ANI trouble ticketer (in ANI B) and an identifier first trial/attempt failure register is scored. A second trial is then attempted. If the second trial should fail in two attempts, the call will go to the CAMA operator for verbal identification and the identifier second trial failure register (2TF in ANI B, 2AF in ANI C and D) is scored.

**Note:** Automatic Number Announcement Circuit (ANAC) caused identifier 2TFs are deductible. The 2TF trouble tickets identified by the ANAC trunk number must be retained for three months for audit purposes.

**7.47** The monthly results are computed as follows:

- (a) Enter the month's total ANI identifier second trial/attempt failures in column H of Form E-6424A.

- (b) Enter deductions as authorized by Form E-6429 in column J.
- (c) Subtract column J from column H and enter the net failures in column K.
- (d) Enter the month's total ANI outpulser peg count, in terms of 10,000, in column L.
- (e) Divide column H by column L and enter the result in column M  $[(H-J)/L = M]$ .

#### **SAMA Stuck Senders and Identifier 2TFs**

**7.48** SAMA Step-by-Step offices are equipped with senders and identifiers which are used to control the outgoing call and provide the necessary calling party information for billing purposes. Failure of either of these units to properly complete their functions causes the calling customer to receive 120 IPM tone. Since the failure ratios of both units are based on the identifier peg count and a stuck sender or identifier 2TF causes the same indication to the customer, they have been combined to form one component in this measurement plan.

**7.49** The monthly results are computed as follows:

- (a) Enter the month's total stuck sender registrations *plus* identifier second trial failures in column H of Form E-6424A.
- (b) Enter deductions as authorized by Form E-6429 in column J.
- (c) Subtract column J from column H and enter the net failures in column K.
- (d) Enter the month's total identifier peg count, in terms of 10,000, in column L.
- (e) Divide column H by column L and enter the result in column M  $[(H-J)/L=M]$ .

#### **CUSTOMER REPORTS**

##### **Customer Trouble Reports, Codes 5 and 8 Equipment**

**7.50** Customer reported troubles which are tested or referred into the central office and which are subsequently found and cleared, and those which are tested or referred to the central office and not found are included as a measured component of this Plan. These specific trouble disposition

codes are described in detail in Section 660-100-013. The trouble conditions measured in this component exclude distributing frame and No. 101 ESS caused trouble.

**7.51** When a code 5 or 8 is assigned as a disposition code to a service not having a directory number, which cannot be associated with a particular switching entity in the office where the trouble was found or referred (ie, local private line or FX line), the code 5 shall be charged arbitrarily to the oldest entity on the main distributing frame. The repair service center should be advised on how to charge these troubles. Separate records by switching entity are required for service measurement.

**7.52** Some SXS offices have a No. 101 ESS control unit associated with it in the same building. The unit is generally located there to provide a central point from which to serve several PBX customers with the same control equipment. For the purpose of computing the customer trouble component index, any code 5 reports attributable to the ESS equipment will be excluded. The point of division between the No. 101 ESS equipment and the SXS equipment shall be at the terminal strip which provides central office access for the PBX trunks. The cross-connections from this terminal strip toward the SXS line relay shall be considered SXS equipment. The equipment from this terminal strip back to the No. 101 ESS, including MDF cross-connections for the data links and trunks to the switch units, shall be considered No. 101 ESS equipment.

**7.53** Trouble reports generated by the No. 101 ESS equipment and properly chargeable to disposition code 5 will be counted on the Form E-2700 as such. A central office trouble ticket (E-5461) will be completed for each such No. 101 ESS trouble. The information on the ticket will include the number of customer trouble reports chargeable to this trouble. The sum of these code 5s will constitute the number of customer trouble reports excluded for measurement purposes from the component index.

**7.54** The monthly results are computed as follows:

- (a) Obtain from the Plant Service Center or Test Bureau the total number of disposition codes 5 and 8 customer reports attributable to the measured SXS unit. Since the Plant Service

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Center does not differentiate the code 5 troubles as equipment, frame, or No. 101 ESS, it will be necessary to determine the number of each from the SXS trouble tickets, Form E-5461. Enter the total month's equipment codes 5 plus 8 in column H of Form E-6424A.

(b) Enter the total count of working main stations plus equivalent main stations as of the first day of the report month, in terms of 100, in column L. Average main stations must be used if the number of main stations change more than 5 percent during the report month.

(c) Divide column H by column L and enter the result in column M.

**Customer Trouble Reports, Code 5 Frame**

**7.55** This component includes only those customer reported troubles which are subsequently found and cleared on a distributing frame as outlined in Section 660-100-013.

**7.56** A code 5 frame shall include all troubles cleared on the various frames used for cross-connecting purposes such as main distributing frame, etc, involving broken wires, loose connections, missing jumpers, defective heat coils, and any other troubles which are cleared on a cross-connect frame.

**7.57** Compute the monthly result as follows:

(a) Enter total code 5-frame customer trouble reports for the month in column H of Form E-6424A.

(b) Enter a total count of working main stations plus equivalent main stations as of the first day of the report month, in terms of 100, in column L. Average main stations must be used if the number of main stations change more than 5 percent during the report month.

(c) Divide column H by column L and enter the result in column M.

**8. PREPARATION OF FORM E-6424A**

**8.01** This Plan includes results data prepared by both administrative and maintenance personnel. Therefore, it is recommended that Form E-6424A be prepared jointly and that all developed input

data be retained in one location as described in Part 6. Organizational structures or geographic locations may dictate alternative methods of report preparation. If so, Form E-6424A should be used to transmit the maintenance or administrative data to a locally arranged report preparation point.

**8.02** All decimal figures recorded in the performance columns of Form E-6424A shall be rounded to two places after the decimal point.

**8.03** The following subparagraphs define the column headings for the performance indicators section of Form E-6424A. (See Attachment 1.)

(a) **Column A—Failures:** Entries in this column will include register scorings or averages of the number of times an event or failure occurred within the defined time frame during the report period, the number of reports, and the amount of outage experienced during the period.

(b) **Column B—Deductions:** Entries in this column will include only those nonservice affecting deductions permitted in accordance with the instructions included in Parts 6 and 7 of this Plan.

(c) **Column C—Net Failures:** Entries in this column are the result of subtracting the deductions in column B from the failures recorded in column A.

(d) **Column D—Base Data:** Entries in this column are individually described in the instructions in Part 7 of this Plan.

(e) **Column E—Performance:** Entries in this column will be the ratios or percentages developed as prescribed in Part 7 of this Plan. NA, NE, or NP will be entered when applicable, according to the instructions in Part 6.

(f) **Column F—Threshold Level:** Entries in this column will be obtained from the threshold level table included in Part 10.

(g) **Column G—Soft Spot:** A check mark (✓) will be entered in this column when the indicator performance is worse than the threshold level, or the data are NA for the report period. NE will be entered when the office is not equipped with the indicator; NP

will be entered when the indicator was not provided.

**8.04** The following subparagraphs define the column headings for the measured components section of Form E-6424A.

(a) **Column H—Failures:** Entries in this column will include register scorings or averages of the number of times an event or failure occurred within the defined time frame during the report period, the number of observed failures, and the number of reports.

(b) **Column J—Deductions:** Entries in this column will include only those nonservice affecting deductions permitted in accordance with the instructions included in Parts 6 and 7 of this Plan.

(c) **Column K—Net Failures:** Entries in this column are the result of subtracting the deductions in column J from the failures recorded in column H.

(d) **Column L—Base Data:** Entries in this column are individually described in the instructions in Part 7 of this Plan.

(e) **Column M—Performance:** Entries in this column will be the ratios or percentages developed as prescribed in Part 7 of this Plan. NA, NE, or NP will be entered when applicable according to the instructions in Part 6 of this Plan.

(f) **Column N—Component Index:** Entries in this column will be obtained from the appropriate index table for the measured item.

(g) **Column P—Index Points:** Entries in this column will be obtained from the appropriate index table in Part 10.

(h) **Column R—Band:** Entries in this column will be the appropriate Band (A, B, C, or D) for each component index.

Band A—98.0-100

Band B—96.0-97.99

Band C—90.0-95.99

Band D—less than 90 or NA.

**8.05** All lines on Form E-6424A are defined in the description of components section or are self-explanatory except the following:

(a) **Line 13:** Enter the total number of performance indicators applicable to the measured SXS unit (including NA) in column E. Enter the total number of soft spots (✓) in column G.

(b) **Line 22—Total Points:** Enter the total index points in column P.

(c) **Line 23—Maximum Available Points:** Enter the maximum points attainable by the measured SXS unit. Enter the total maximum points of all components for which results are measured. Exclude NE, NP, and NA components.

(d) **Line 24—Total Index:** Divide line 22 by line 23 and enter the result expressed as a percent ( $L22/L23 \times 100 = L24$ ).

**SXS NETWORK SWITCHING PERFORMANCE  
MEASUREMENT PLAN  
PERFORMANCE INDICATORS**

Indicator	A Failures	B Deductions	C Net Failures	D Base		E Performance	F Threshold Level	G Soft-Spot	
				Item	Data				
<b>Machine Access</b>									
1 All L.F. Busy	45532			WKS LINES	18972	2.40	3.00		
2 All O.R. Busy	243			OR-PC OTS-BH	16923	1.44	1.00	✓	
3 Last Trunk Usage						0	0		
<b>Machine Switching</b>									
4 Trunk Outage						97.00	95.00		
5 Final Grp > 3% N.C.						3	0	✓	
6 Load Balance						98.00	94.00		
7 Switch Outage	5743	0	5743	TOT SW.	26104	.22	.20	✓	
8 Common Equip. Outage	495	0	495	TOT EQ.	66	7.50	10.00		
<b>Billing</b>									
9 ANI Ident. ITF	2760	55	2705	OP-PC	40.2617	67.19	150.00	NE	
10 Transv. ITF				TV-PC		NE	13.00	NE	
11 Bulk Bill Free				TV-PC		NE	4.00	NE	
<b>Customer Reports</b>									
12 Code 7	314			/100 MS	191.94	1.64	2.00		
13	Total No. of Indicators					10	Total No. Soft Spot		3

**MEASURED COMPONENTS**

Component	H Max. Points	J Failures	K Deductions	L Net Failures	M Base		N Performance	P Component Index	Q Index Points	R Band
					Item	Data				
<b>Machine Access</b>										
14 Dial Tone Speed	20						34.70	99.00	19.80	A
<b>Machine Switching</b>										
15 Equip. Irregs.	20	3			= OF S.O.	910	.33	96.50	19.30	B
16 % R.O./N.C.	15	6			= OF S.O.	910	.66	97.00	14.55	B
<b>Billing</b>										
17 ANI OPF/SAMA TV	5	406	0	406	OP-PC TV-PC	40.2847	10.08	97.50	4.87	B
18 ANI OSF/SAMA REC	5	481	0	481	OP-PC TV-PC	40.3098	11.93	97.50	4.87	B
19 ANI 2TF/SAMA SS + ID	10	2242	123	2119	OP-PC TV-PC	40.2617	52.63	95.50	9.55	C
<b>Customer Reports</b>										
20 Equip. Code 5+8	20	208			/100 MS	191.94	1.08	93.50	18.70	C
21 Frame Code 5	5	25			/100 MS	191.94	0.13	95.00	4.75	C
22	Total Pts.								96.39	
23	Max. Avail. Pts.								100.00	
24	Total Index								96.39	B

**REMARKS**

OPF register changed 9-18

	S	T	U	V
25 Prepared by	JJS	Office	617-672	Division NORTH Company SOMECO
26 Checked by	TEB	District	EAST	Area STATE Period SEPT 1976

**9. PREPARATION OF FORM E-6424B**

**9.01** Form E-6424B is a two-page summary report.

It will provide all management echelons with a summary of the switching performance of the SXS offices within their area of responsibility.

**9.02** The form provides four summaries of results information:

- (a) The number and percent of offices by index band in each measured component
- (b) The trend of Band D offices in each measured component
- (c) The number of offices beyond threshold in each performance indicator
- (d) Actual results of offices in each Band D measured component.

**9.03** All data recorded on Form E-6424B (except percentage calculations) are taken directly from the represented E-6424A reports.

**9.04** A dash (-) or no entry should be made in the Band D Trends section of Form E-6424B if all offices exceeded Band D performance during the applicable preceding report period.

**9.05** The form serves three purposes. Attachments are provided as examples to follow when preparing Form E-6424B for each of the purposes:

- (a) Multioffice, single month—Attachment 2
- (b) Multimonth, single office—Attachment 3
- (c) Multioffice, multimonth—Attachment 4.

**9.06** The following subparagraphs define the column headings of Form E-6424B and provide the source data locations on Form E-6424A:

- (a) **Column C:** Enter the number of offices measured in each component.
- (b) **Column D:** Enter the number of office month reports (see attachments).

(c) **Columns E Through H:** Enter the number and percent of offices in the appropriate band column for each component from columns R on Form E-6424A.

(d) **Column L:** Enter the number and percent of offices which experienced Band D performance in any of the twelve preceding report periods. These data are obtained from the previous E-6424B report.

(e) **Column AG:** Enter the office name of those SXS units which experienced Band D performance in any measured component. If the report is a multimonth report, enter the appropriate months.

(f) **Column AH:** Enter the number of times in the twelve previous periods in which the listed office experienced any component Band D performance. If the report is a multimonth report, make no entries.

(g) **Columns AJ Through AR:** Enter the Band D component index levels for each office listed. If the report is a multioffice-multimonth report, enter the number of Band D offices in each component.

(h) **Column AS:** Enter the number of soft spot performance indicators for each listed office from line 13G of Form E-6424A.

(i) **Column AT:** Enter the number of measured performance indicators for each listed office from line 13E of Form E-6424A.

(j) **Line 38, No. of Office Months:** Enter the number of office report months for each of the performance indicators from columns G of Forms E-6424A.

(k) **Line 39, No. Soft Spot:** Enter the number of office months in which soft spot performance was experienced from Forms E-6424A, columns G.

SXS NETWORK SWITCHING PERFORMANCE MEASUREMENT PLAN

A		B	C	D	E F G H				
					Number and % of Office Mo. Rpt. by Index Band				
Measured Component		WEIGHT	Total No. of Offices	Total No. of Ofc. Month Reports	A 98.0 100	B 96.0 97.9	C 90.0 95.9	D <90	
1	MACH. ACC.	Dial Tone Speed	20	10	10	2	3	3	2
2		% of Total			20.0	30.0	30.0	20.0	
3	SWITCHING	Equipment Irregularities	20	10	10	7	2	-	1
4		Percent		10	10	70.0	20.0	-	10.0
5		R.O./N.C.	15		10	6	3	1	-
6		% of Total			60.0	30.0	10.0	-	
7	BILLING	ANI Outpulser		10	10	4	4	1	1
8		SAMA Transverter	5			40.0	40.0	10.0	10.0
9		ANI Outpulser Seizure		9	9	7	2	-	-
10		SAMA Recorder	5			77.8	22.2	-	-
11		ANI Identifier 2TF		10	10	5	2	2	1
12		SAMA SS+ID 2TF	10			50.0	20.0	20.0	10.0
13		% of Total							
14	CUEPST.	Code 5 & 8		10	10	2	6	1	1
15		Equipment	20			20.0	60.0	10.0	10.0
16		Code 5		10	10	2	5	2	1
17		Frame	5			20.0	50.0	20.0	10.0
18		% of Total							
17		Total		10	10	2	6	1	1
18		Index	100			20.0	60.0	10.0	10.0

BAND D TRENDS

J		K	L												
			Aug July June May Apr Preceding Periods Dec Nov Oct Sep												
Measured Component			1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	
19	MACH. ACC.	Dial Tone Speed	No. of Offices	1	-	-	1	-	-	2	1	-	-	1	1
20		% of Total		10.0	-	-	10.0	-	-	20.0	10.0	-	-	10.0	10.0
21	SWITCHING	Equipment Irregularities	No. of Offices	1	2	3	-	2	1	-	-	1	-	-	-
22		Percent		10.0	20.0	30.0	-	20.0	10.0	-	-	10.0	-	-	-
23		R.O./N.C.	No. of Offices	1	-	-	1	1	2	-	-	1	-	-	1
24		% of Total		10.0	-	-	10.0	10.0	20.0	-	-	10.0	-	-	10.0
25	BILLING	ANI Outpulser	No. of Offices	-	-	1	1	2	-	1	-	-	2	-	-
26		SAMA Transverter		-	-	10.0	10.0	20.0	-	10.0	-	-	20.0	-	-
27		ANI Outpulser Seizure	No. of Offices	-	-	1	-	-	-	1	-	-	-	2	-
28		SAMA Recorder		-	-	11.1	-	-	-	11.1	-	-	-	22.2	-
29		ANI Identifier 2TF	No. of Offices	1	-	-	2	-	1	-	1	1	-	-	1
30		% of Total		10.0	-	-	20.0	-	10.0	-	10.0	10.0	-	-	10.0
31	CUEPST.	Code 5 & 8	No. of Offices	1	1	2	1	1	1	1	1	2	1	1	
32		Equipment		10.0	10.0	20.0	10.0	10.0	-	10.0	10.0	10.0	20.0	10.0	10.0
33		Code 5	No. of Offices	1	-	-	2	1	1	-	1	2	-	1	1
34		Frame		10.0	-	-	20.0	10.0	10.0	-	10.0	20.0	-	10.0	10.0
35		% of Total													
35		Total	No. of Offices	1	1	2	-	-	1	-	1	-	-	2	-
36		Index		10.0	10.0	20.0	-	-	10.0	-	10.0	-	-	20.0	-

M	N	P	Q	R	S
Office	District	Division	Area	Company	Report Period
		NORTH	STATE	SOMECO	SEPT 1976

SXS NETWORK SWITCHING PERFORMANCE MEASUREMENT PLAN

PERFORMANCE INDICATORS

	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF
	Machine Access			Machine Switching					Billing			CTR	
	All L.F. Busy	All O.R. Busy	Last Trunk Usage	Trunk Outage	Final Group > 3% N.C.	Load Bal.	Switch Outage	Common Equip. Outage	ANI SAMA ID 1TF	TV ITF	Bulk Bill Free	Code 7	
38	No. Office Months	10	8	5	10	10	NP	10	10	10	NE	NE	10
39	No. Soft Spot	3	2	0	6	3	-	2	0	1	-	-	4

BAND D OFFICES  
This Period

	AG	AH	AJ	AK	AL	AM	AN	AP	AQ	AR	AS	AT
Office (or Month)	No. of Times In 12 Prev. Pds.	Measured Component Index								Performance Indicators		
		Machine Access		Machine Switching		Billing			Customer Reports		Total No. Soft Spot	Total No. of Ind.
		Dial Tone Speed	E.I.	% R.O./N.C.	ANI OPF SAMA TV	ANI OSF SAMA REC	ANI ID 2TF SAMA SS+2TF	Code 5 & 8 Equip.	Code 5 Frame			
40	215-444	1	88.0						75.0		3	9
41	215-935	4		87.0							2	9
42	814-396	0			82.0						2	9
43	814-398	3	NA					85.0		78.0	5	9
44												
45												
46												
47												
48												
49												
50												
51												
52												
53												
54												
55												
56												
57												
58												
59												
60												
61												

REMARKS


	M	N	P	Q	R	S
37	Office	District	Division NORTH	Area STATE	Company SOMECO	Report Period SEPT 1976

SXS NETWORK SWITCHING PERFORMANCE MEASUREMENT PLAN

Measured Component		W E I G H T	Total No. of Offices	Total No. of Ofc. Month Reports	Number and % of Office Mo. Rpt. by Index Band				
					A 98.0 100	B 96.0 97.9	C 90.0 95.9	D <90	
1	MACH. ACC.	Dial Tone Speed	20	1	3	2	1		
2				% of Total		66.7	33.3		
3	MACH. SWITCH	Equipment Irregularities	20	1	3	1	1	1	
4				% of Total		33.3	33.3	33.3	
5		Percent R.O./N.C.	15	1	3	2	1		
6				% of Total		66.7	33.3		
7	BILLING	ANI Outpulser SAMA Transverter	5	1	3		2	1	
8				% of Total			66.7	33.3	
9		ANI Outpulser Seizure SAMA Recorder	5	1	3	2	1		
10				% of Total		66.7	33.3		
11	BILLING	ANI Identifier 2TF SAMA SS+ID 2TF	10	1	3	1	1		1
12				% of Total		33.3	33.3		33.3
13	CUEP.T.T.	Code 5 & 8 Equipment	20	1	3			1	2
14				% of Total				33.3	66.7
15		Code 5 Frame	5	1	3	1	1	1	
16				% of Total		33.3	33.3	33.3	
17		Total Index	100	1	3		1	2	
18				% of Total			33.3	66.7	

BAND D TRENDS

Measured Component			Preceding Periods														
			2Q	1Q	4Q	3Q	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th
19	MACH. ACC.	Dial Tone Speed	No. of Offices														
20			% of Total														
21	MACH. SWITCH	Equipment Irregularities	No. of Offices		1												
22			% of Total		33.3												
23	MACH. SWITCH	Percent R.O./N.C.	No. of Offices														
24			% of Total														
25	BILLING	ANI Outpulser SAMA Transverter	No. of Offices														
26			% of Total														
27		ANI Outpulser Seizure SAMA Recorder	No. of Offices		1												
28			% of Total		33.3												
29	BILLING	ANI Identifier 2TF SAMA SS+ID 2TF	No. of Offices				1										
30			% of Total				33.3										
31	CUEP.T.T.	Code 5 & 8 Equipment	No. of Offices			2											
32			% of Total			66.7											
33		Code 5 Frame	No. of Offices	1													
34		% of Total	33.3														
35		Total Index	No. of Offices			1											
36		% of Total			33.3												

37	Office 617-672	District EAST	Division NORTH	Area STATE	Company SOMEKO	Report Period 3Q 1976	37
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**SXS NETWORK SWITCHING PERFORMANCE MEASUREMENT PLAN**

**PERFORMANCE INDICATORS**

	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF
	Machine Access			Machine Switching					Billing			CTR	
	All L.F. Busy	All O.R. Busy	Last Trunk Usage	Trunk Outage	Final Group > 3% N.C.	Load Bal.	Switch Outage	Common Equip. Outage	ANI SAMA ID 1TF	TV 1TF	Bulk Bill Free	Code 7	
38	No. Office Months	3	3	3	3	3	NP	3	3	3	NE	NE	3
39	No. Soft Spot	0	0	1	0	2	-	0	1	2	-	-	1

**BAND D OFFICES  
This Period**

	AG	AH	AJ	AK	AL	AM	AN	AP	AQ	AR	AS	AT	
Office (or Month)	No. of Times In 12 Prev. Pds.	Measured Component Index								Performance Indicators			
		Machine Access		Machine Switching		Billing			Customer Reports		Total No. Soft Spot	Total No. of Ind.	
		Dial Tone Speed	E.I.	% R.O./N.C.	ANI OPF SAMA TV	ANI OSF SAMA REC	ANI ID 2TF SAMA SS+2TF	Code 5 & 8 Equip.	Code 5 Frame				
40	JULY									82.5		3	9
41	AUGUST								80.0			2	9
42	SEPTEMBER									89.5		2	9
43													
44													
45													
46													
47													
48													
49													
50													
51													
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53													
54													
55													
56													
57													
58													
59													
60													
61													

**REMARKS**


	M	N	P	Q	R	S
37	Office 617-672	District EAST	Division NORTH	Area STATE	Company SOMECO	Report Period 3Q 1976

SXS NETWORK SWITCHING PERFORMANCE MEASUREMENT PLAN

	A	B	C	D	E	F	G	H	Number and % of Office Mo. Rpt. by Index Band					
									A 98.0 100	B 96.0 97.9	C 90.0 95.9	D <90		
1 MACH. ACC.	Dial Tone Speed	20	10 % of Total	120	30 25.0	60 50.0	27 22.5	3 2.5						
2 MACH. SWITCH	Equipment Irregularities	20	10 % of Total	120	27 22.5	65 54.2	28 23.3	-						
	Percent		10	120	30	80	10	-						
	R.O./N.C.	15	% of Total		25.0	66.7	8.3	-						
7 BILLING	ANI Outpulser		10	120	30	67	21	2						
	SAMA Transverter	5	% of Total		25.0	55.8	17.5	1.7						
	ANI Outpulser Seizure		10	120	42	40	36	2						
	SAMA Recorder	5	% of Total		35.0	33.3	30.0	1.7						
	ANI Identifier 2TF		10	120	32	67	19	2						
13 C.U.S.T.	SAMA SS+ID 2TF	10	% of Total		26.7	55.8	15.8	1.7						
	Code 5 & 8		10	120	28	62	28	2						
	Equipment	20	% of Total		23.3	51.7	23.3	1.7						
	Code 5 Frame	5	% of Total		30	70	19	1						
17	Total		10	120	29	70	19	2						
18	Index	100	% of Total		24.2	58.3	15.8	1.7						

BAND D TRENDS

	J	K	L	Preceding Periods													
				1974	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	
19 MACH. ACC.	Dial Tone Speed	No. of Offices	4														
		% of Total	3.3														
21 MACH. SWITCH	Equipment Irregularities	No. of Offices	2														
		% of Total	1.7														
	Percent	No. of Offices	1														
24	R.O./N.C.	% of Total	.8														
25 BILLING	ANI Outpulser	No. of Offices	3														
	SAMA Transverter	% of Total	2.5														
	ANI Outpulser Seizure	No. of Offices	-														
	SAMA Recorder	% of Total	-														
	ANI Identifier 2TF	No. of Offices	3														
30	SAMA SS+ID 2TF	% of Total	2.5														
31 C.U.S.T.	Code 5 & 8	No. of Offices	2														
	Equipment	% of Total	1.7														
	Code 5 Frame	No. of Offices	1														
34		% of Total	.8														
35	Total	No. of Offices	4														
36	Index	% of Total	3.3														

M	N	P	Q	R	S
37 Office	District	Division	Area STATE	Company SOMECO	Report Period YEAR 1975

SXS NETWORK SWITCHING PERFORMANCE MEASUREMENT PLAN

PERFORMANCE INDICATORS

	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF
	Machine Access			Machine Switching					Billing			CTR	
	All L.F. Busy	All O.R. Busy	Last Trunk Usage	Trunk Outage	Final Group > 3% N.C.	Load Bal.	Switch Outage	Common Equip. Outage	ANI SAMA ID 1TF	TV ITF	Bulk Bill Free	Code 7	
38	No. Office Months	120	72	24	120	120	NP	120	72	120	NE	NE	120
39	No. Soft Spot	12	8	3	11	14	-	3	7	10	-	-	14

BAND D OFFICES  
This Period

	AG	AH	AJ	AK	AL	AM	AN	AP	AQ	AR	AS	AT
Office (or Month)	No. of Times In 12 Prev. Pds.	Measured Component Index									Performance Indicators	
		Machine Access	Machine Switching		Billing			Customer Reports		Total No. Soft Spot	Total No. of Ind.	
			Dial Tone Speed	E.I.	% R.O./N.C.	ANI OPF SAMA TV	ANI OSF SAMA REC	ANI ID 2TF SAMA SS+2TF	Code 5 & 8 Equip.			Code 5 Frame
40	January						2					
41	February	2										
42	March											
43	April					1						
44	May											
45	June							1				
46	July								2			
47	August											
48	September											
49	October					1						
50	November											
51	December		1						1		1	
52												
53												
54												
55												
56												
57												
58												
59												
60												
61												

REMARKS


	M	N	P	Q	R	S
37	Office	District	Division	Area STATE	Company SOMECO	Report Period YEAR 1975

**SECTION 226-001-005**

**10. INDEX TABLES**

**10.01** This part of the Plan contains performance indicator threshold levels and measured component index tables to be used to complete the monthly E-6424A form.

**THRESHOLD LEVELS**

<b>MACHINE ACCESS</b>	<b>THRESHOLD</b>
All Line Finders Busy	3.00
All Originating Registers Busy	1.00
Last Trunk Usage	0

**MACHINE SWITCHING**

**THRESHOLD**

Trunk Outage	95.00
Final Groups Over 3 Percent NC	0
Load Balance	94.00
Switch Outage	.20
Common Equipment Outage	10.00

**BILLING**

ANI Identifier, 1TF/1AF	150.00
SAMA Identifier 1TF	50.00
SAMA Transverter 1TF	13.00
Bulk Billed Free	4.00

**CUSTOMER REPORTS**

Code 7	2.00
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## DIAL TONE SPEED

PERFORMANCE		COMP. INDEX	INDEX POINTS	PERFORMANCE		COMP. INDEX	INDEX POINTS
FROM	TO			FROM	TO		
35.00	- 34.98	100.00	20.00	29.33	- 29.27	72.00	14.40
34.97	- 34.79	99.50	19.90	29.26	- 29.19	71.00	14.20
34.78	- 34.61	99.00	19.80	29.18	- 29.12	70.00	14.00
34.60	- 34.42	98.50	19.70	29.11	- 29.05	69.00	13.80
34.41	- 34.24	98.00	19.60	29.04	- 28.98	68.00	13.60
34.23	- 34.06	97.50	19.50	28.97	- 28.92	67.00	13.40
34.05	- 33.88	97.00	19.40	28.91	- 28.85	66.00	13.20
33.87	- 33.70	96.50	19.30	28.84	- 28.79	65.00	13.00
33.69	- 33.52	96.00	19.20	28.78	- 28.72	64.00	12.80
33.51	- 33.35	95.50	19.10	28.71	- 28.66	63.00	12.60
33.34	- 33.17	95.00	19.00	28.65	- 28.60	62.00	12.40
33.16	- 32.99	94.50	18.90	28.59	- 28.54	61.00	12.20
32.98	- 32.82	94.00	18.80	28.53	- 28.48	60.00	12.00
32.81	- 32.65	93.50	18.70	28.47	- 28.42	59.00	11.80
32.64	- 32.47	93.00	18.60	28.41	- 28.37	58.00	11.60
32.46	- 32.30	92.50	18.50	28.36	- 28.31	57.00	11.40
32.29	- 32.13	92.00	18.40	28.30	- 28.26	56.00	11.20
32.12	- 31.96	91.50	18.30	28.25	- 28.20	55.00	11.00
31.95	- 31.79	91.00	18.20	28.19	- 28.15	54.00	10.80
31.78	- 31.63	90.50	18.10	28.14	- 28.10	53.00	10.60
31.62	- 31.46	90.00	18.00	28.09	- 28.04	52.00	10.40
31.45	- 31.31	89.50	17.90	28.03	- 27.99	51.00	10.20
31.30	- 31.19	89.00	17.80	27.98	- 27.94	50.00	10.00
31.18	- 31.08	88.50	17.70	27.93	- 27.84	48.00	9.60
31.07	- 30.98	88.00	17.60	27.83	- 27.73	46.00	9.20
30.97	- 30.89	87.50	17.50	27.72	- 27.62	44.00	8.80
30.88	- 30.80	87.00	17.40	27.61	- 27.51	42.00	8.40
30.79	- 30.72	86.50	17.30	27.50	- 27.40	40.00	8.00
30.71	- 30.65	86.00	17.20	27.39	- 27.28	38.00	7.60
30.64	- 30.58	85.50	17.10	27.27	- 27.16	36.00	7.20
30.57	- 30.51	85.00	17.00	27.15	- 27.03	34.00	6.80
30.50	- 30.44	84.50	16.90	27.02	- 26.90	32.00	6.40
30.43	- 30.38	84.00	16.80	26.89	- 26.76	30.00	6.00
30.37	- 30.32	83.50	16.70	26.75	- 26.61	28.00	5.60
30.31	- 30.26	83.00	16.60	26.60	- 26.46	26.00	5.20
30.25	- 30.21	82.50	16.50	26.45	- 26.30	24.00	4.80
30.20	- 30.15	82.00	16.40	26.29	- 26.12	22.00	4.40
30.14	- 30.10	81.50	16.30	26.11	- 25.93	20.00	4.00
30.09	- 30.05	81.00	16.20	25.92	- 25.73	18.00	3.60
30.04	- 29.99	80.50	16.10	25.72	- 25.50	16.00	3.20
29.98	- 29.95	80.00	16.00	25.49	- 25.23	14.00	2.80
29.94	- 29.85	79.00	15.80	25.22	- 24.90	12.00	2.40
29.84	- 29.76	78.00	15.60	24.89	- 24.42	10.00	2.00
29.75	- 29.67	77.00	15.40	24.41	- 23.75	8.00	1.60
29.66	- 29.58	76.00	15.20	23.74	- 23.06	6.00	1.20
29.57	- 29.50	75.00	15.00	23.05	- 22.36	4.00	0.80
29.49	- 29.42	74.00	14.80	22.35	- 21.64	2.00	0.40
29.41	- 29.34	73.00	14.60	BELOW 21.64		0.0	0.0

Measured Component Index Table

## EQUIPMENT IRREGULARITIES

PERFORMANCE		COMP.	INDEX	PERFORMANCE		COMP.	INDEX
FROM	TO	INDEX	POINTS	FROM	TO	INDEX	POINTS
0.0	0.0	100.00	20.00	1.45	1.46	72.00	14.40
0.01	0.05	99.50	19.90	1.47	1.48	71.00	14.20
0.06	0.10	99.00	19.80	1.49	1.49	70.00	14.00
0.11	0.15	98.50	19.70	1.50	1.51	69.00	13.80
0.16	0.20	98.00	19.60	1.52	1.53	68.00	13.60
0.21	0.25	97.50	19.50	1.54	1.55	67.00	13.40
0.26	0.30	97.00	19.40	1.56	1.56	66.00	13.20
0.31	0.35	96.50	19.30	1.57	1.58	65.00	13.00
0.36	0.39	96.00	19.20	1.59	1.60	64.00	12.80
0.40	0.44	95.50	19.10	1.61	1.61	63.00	12.60
0.45	0.48	95.00	19.00	1.62	1.63	62.00	12.40
0.49	0.53	94.50	18.90	1.64	1.64	61.00	12.20
0.54	0.57	94.00	18.80	1.65	1.66	60.00	12.00
0.58	0.61	93.50	18.70	1.67	1.67	59.00	11.80
0.62	0.66	93.00	18.60	1.68	1.69	58.00	11.60
0.67	0.70	92.50	18.50	1.70	1.70	57.00	11.40
0.71	0.74	92.00	18.40	1.71	1.72	56.00	11.20
0.75	0.78	91.50	18.30	1.73	1.73	55.00	11.00
0.79	0.82	91.00	18.20	1.74	1.75	54.00	10.80
0.83	0.86	90.50	18.10	1.76	1.76	53.00	10.60
0.87	0.90	90.00	18.00	1.77	1.77	52.00	10.40
0.91	0.94	89.50	17.90	1.78	1.79	51.00	10.20
0.95	0.97	89.00	17.80	1.80	1.80	50.00	10.00
0.98	0.99	88.50	17.70	1.81	1.83	48.00	9.60
1.00	1.02	88.00	17.60	1.84	1.85	46.00	9.20
1.03	1.04	87.50	17.50	1.86	1.88	44.00	8.80
1.05	1.06	87.00	17.40	1.89	1.91	42.00	8.40
1.07	1.08	86.50	17.30	1.92	1.94	40.00	8.00
1.09	1.10	86.00	17.20	1.95	1.97	38.00	7.60
1.11	1.12	85.50	17.10	1.98	2.00	36.00	7.20
1.13	1.14	85.00	17.00	2.01	2.04	34.00	6.80
1.15	1.15	84.50	16.90	2.05	2.07	32.00	6.40
1.16	1.17	84.00	16.80	2.08	2.11	30.00	6.00
1.18	1.19	83.50	16.70	2.12	2.14	28.00	5.60
1.20	1.20	83.00	16.60	2.15	2.18	26.00	5.20
1.21	1.21	82.50	16.50	2.19	2.23	24.00	4.80
1.22	1.23	82.00	16.40	2.24	2.27	22.00	4.40
1.24	1.24	81.50	16.30	2.28	2.32	20.00	4.00
1.25	1.26	81.00	16.20	2.33	2.37	18.00	3.60
1.27	1.27	80.50	16.10	2.38	2.43	16.00	3.20
1.28	1.28	80.00	16.00	2.44	2.50	14.00	2.80
1.29	1.31	79.00	15.80	2.51	2.58	12.00	2.40
1.32	1.33	78.00	15.60	2.59	2.70	10.00	2.00
1.34	1.35	77.00	15.40	2.71	2.86	8.00	1.60
1.36	1.37	76.00	15.20	2.87	3.03	6.00	1.20
1.38	1.40	75.00	15.00	3.04	3.21	4.00	0.80
1.41	1.42	74.00	14.80	3.22	3.40	2.00	0.40
1.43	1.44	73.00	14.60	ABOVE	3.40	0.0	0.0

Measured Component Index Table

## PERCENT REORDER/NO CIRCUIT

PERFORMANCE		COMP.	INDEX	PERFORMANCE		COMP.	INDEX
FROM	TO	INDEX	POINTS	FROM	TO	INDEX	POINTS
0.0	- 0.30	100.00	15.00	1.73	- 1.74	72.00	10.80
0.31	- 0.39	99.50	14.92	1.75	- 1.76	71.00	10.65
0.40	- 0.47	99.00	14.85	1.77	- 1.78	70.00	10.50
0.48	- 0.54	98.50	14.77	1.79	- 1.79	69.00	10.35
0.55	- 0.60	98.00	14.70	1.80	- 1.81	68.00	10.20
0.61	- 0.65	97.50	14.62	1.82	- 1.83	67.00	10.05
0.66	- 0.70	97.00	14.55	1.84	- 1.85	66.00	9.90
0.71	- 0.75	96.50	14.47	1.86	- 1.87	65.00	9.75
0.76	- 0.79	96.00	14.40	1.88	- 1.88	64.00	9.60
0.80	- 0.83	95.50	14.32	1.89	- 1.90	63.00	9.45
0.84	- 0.87	95.00	14.25	1.91	- 1.92	62.00	9.30
0.88	- 0.91	94.50	14.17	1.93	- 1.93	61.00	9.15
0.92	- 0.95	94.00	14.10	1.94	- 1.95	60.00	9.00
0.96	- 0.98	93.50	14.02	1.96	- 1.97	59.00	8.85
0.99	- 1.02	93.00	13.95	1.98	- 1.98	58.00	8.70
1.03	- 1.05	92.50	13.87	1.99	- 2.00	57.00	8.55
1.06	- 1.08	92.00	13.80	2.01	- 2.01	56.00	8.40
1.09	- 1.11	91.50	13.72	2.02	- 2.03	55.00	8.25
1.12	- 1.14	91.00	13.65	2.04	- 2.04	54.00	8.10
1.15	- 1.17	90.50	13.57	2.05	- 2.06	53.00	7.95
1.18	- 1.20	90.00	13.50	2.07	- 2.07	52.00	7.80
1.21	- 1.23	89.50	13.42	2.08	- 2.09	51.00	7.65
1.24	- 1.25	89.00	13.35	2.10	- 2.10	50.00	7.50
1.26	- 1.28	88.50	13.27	2.11	- 2.13	48.00	7.20
1.29	- 1.30	88.00	13.20	2.14	- 2.16	46.00	6.90
1.31	- 1.32	87.50	13.12	2.17	- 2.19	44.00	6.60
1.33	- 1.34	87.00	13.05	2.20	- 2.22	42.00	6.30
1.35	- 1.36	86.50	12.97	2.23	- 2.25	40.00	6.00
1.37	- 1.38	86.00	12.90	2.26	- 2.28	38.00	5.70
1.39	- 1.39	85.50	12.82	2.29	- 2.32	36.00	5.40
1.40	- 1.41	85.00	12.75	2.33	- 2.35	34.00	5.10
1.42	- 1.43	84.50	12.67	2.36	- 2.39	32.00	4.80
1.44	- 1.44	84.00	12.60	2.40	- 2.42	30.00	4.50
1.45	- 1.46	83.50	12.52	2.43	- 2.46	28.00	4.20
1.47	- 1.47	83.00	12.45	2.47	- 2.51	26.00	3.90
1.48	- 1.49	82.50	12.37	2.52	- 2.55	24.00	3.60
1.50	- 1.50	82.00	12.30	2.56	- 2.60	22.00	3.30
1.51	- 1.51	81.50	12.22	2.61	- 2.65	20.00	3.00
1.52	- 1.53	81.00	12.15	2.66	- 2.70	18.00	2.70
1.54	- 1.54	80.50	12.07	2.71	- 2.76	16.00	2.40
1.55	- 1.55	80.00	12.00	2.77	- 2.82	14.00	2.10
1.56	- 1.58	79.00	11.85	2.83	- 2.90	12.00	1.80
1.59	- 1.60	78.00	11.70	2.91	- 3.00	10.00	1.50
1.61	- 1.63	77.00	11.55	3.01	- 3.12	8.00	1.20
1.64	- 1.65	76.00	11.40	3.13	- 3.25	6.00	0.90
1.66	- 1.67	75.00	11.25	3.26	- 3.41	4.00	0.60
1.68	- 1.69	74.00	11.10	3.42	- 3.60	2.00	0.30
1.70	- 1.72	73.00	10.95	ABOVE	3.60	0.0	0.0

Measured Component Index Table

## ANI OUTPULSER FAILURES

PERFORMANCE		COMP.	INDEX	PERFORMANCE		COMP.	INDEX
FROM	TO	INDEX	POINTS	FROM	TO	INDEX	POINTS
0.0	- 0.50	100.00	5.00	63.01	- 63.83	72.00	3.60
0.51	- 2.52	99.50	4.97	63.84	- 64.64	71.00	3.55
2.53	- 4.53	99.00	4.95	64.65	- 65.44	70.00	3.50
4.54	- 6.53	98.50	4.92	65.45	- 66.21	69.00	3.45
6.54	- 8.53	98.00	4.90	66.22	- 66.97	68.00	3.40
8.54	- 10.52	97.50	4.87	66.98	- 67.71	67.00	3.35
10.53	- 12.50	97.00	4.85	67.72	- 68.43	66.00	3.30
12.51	- 14.47	96.50	4.82	68.44	- 69.14	65.00	3.25
14.48	- 16.44	96.00	4.80	69.15	- 69.84	64.00	3.20
16.45	- 18.40	95.50	4.77	69.85	- 70.53	63.00	3.15
18.41	- 20.35	95.00	4.75	70.54	- 71.20	62.00	3.10
20.36	- 22.30	94.50	4.72	71.21	- 71.86	61.00	3.05
22.31	- 24.24	94.00	4.70	71.87	- 72.51	60.00	3.00
24.25	- 26.17	93.50	4.67	72.52	- 73.15	59.00	2.95
26.18	- 28.09	93.00	4.65	73.16	- 73.78	58.00	2.90
28.10	- 30.01	92.50	4.62	73.79	- 74.40	57.00	2.85
30.02	- 31.92	92.00	4.60	74.41	- 75.01	56.00	2.80
31.93	- 33.83	91.50	4.57	75.02	- 75.61	55.00	2.75
33.84	- 35.72	91.00	4.55	75.62	- 76.20	54.00	2.70
35.73	- 37.61	90.50	4.52	76.21	- 76.79	53.00	2.65
37.62	- 39.50	90.00	4.50	76.80	- 77.37	52.00	2.60
39.51	- 41.18	89.50	4.47	77.38	- 77.94	51.00	2.55
41.19	- 42.57	89.00	4.45	77.95	- 78.50	50.00	2.50
42.58	- 43.79	88.50	4.42	78.51	- 79.63	48.00	2.40
43.80	- 44.89	88.00	4.40	79.64	- 80.80	46.00	2.30
44.90	- 45.90	87.50	4.37	80.81	- 81.99	44.00	2.20
45.91	- 46.84	87.00	4.35	82.00	- 83.22	42.00	2.10
46.85	- 47.72	86.50	4.32	83.23	- 84.49	40.00	2.00
47.73	- 48.55	86.00	4.30	84.50	- 85.80	38.00	1.90
48.56	- 49.34	85.50	4.27	85.81	- 87.16	36.00	1.80
49.35	- 50.09	85.00	4.25	87.17	- 88.57	34.00	1.70
50.10	- 50.81	84.50	4.22	88.58	- 90.03	32.00	1.60
50.82	- 51.51	84.00	4.20	90.04	- 91.56	30.00	1.50
51.52	- 52.18	83.50	4.17	91.57	- 93.17	28.00	1.40
52.19	- 52.83	83.00	4.15	93.18	- 94.86	26.00	1.30
52.84	- 53.45	82.50	4.12	94.87	- 96.66	24.00	1.20
53.46	- 54.06	82.00	4.10	96.67	- 98.58	22.00	1.10
54.07	- 54.65	81.50	4.07	98.59	-100.66	20.00	1.00
54.66	- 55.23	81.00	4.05	100.67	-102.94	18.00	0.90
55.24	- 55.79	80.50	4.02	102.95	-105.49	16.00	0.80
55.80	- 56.34	80.00	4.00	105.50	-108.45	14.00	0.70
56.35	- 57.40	79.00	3.95	108.46	-112.11	12.00	0.60
57.41	- 58.42	78.00	3.90	112.12	-117.50	10.00	0.50
58.43	- 59.40	77.00	3.85	117.51	-125.08	8.00	0.40
59.41	- 60.34	76.00	3.80	125.09	-132.76	6.00	0.30
60.35	- 61.25	75.00	3.75	132.77	-140.56	4.00	0.20
61.26	- 62.14	74.00	3.70	140.57	-148.47	2.00	0.10
62.15	- 63.00	73.00	3.65	ABOVE148.47		0.0	0.0

Measured Component Index Table

## SAMA TRANSVERTER 2TF

PERFORMANCE		COMP. INDEX	INDEX POINTS	PERFORMANCE		COMP. INDEX	INDEX POINTS
FROM	TO			FROM	TO		
0.0	- 0.20	100.00	5.00	8.38	- 8.47	72.00	3.60
0.21	- 0.47	99.50	4.97	8.48	- 8.58	71.00	3.55
0.48	- 0.74	99.00	4.95	8.59	- 8.69	70.00	3.50
0.75	- 1.01	98.50	4.92	8.70	- 8.79	69.00	3.45
1.02	- 1.27	98.00	4.90	8.80	- 8.89	68.00	3.40
1.28	- 1.54	97.50	4.87	8.90	- 8.98	67.00	3.35
1.55	- 1.80	97.00	4.85	8.99	- 9.08	66.00	3.30
1.81	- 2.06	96.50	4.82	9.09	- 9.17	65.00	3.25
2.07	- 2.32	96.00	4.80	9.18	- 9.26	64.00	3.20
2.33	- 2.58	95.50	4.77	9.27	- 9.35	63.00	3.15
2.59	- 2.83	95.00	4.75	9.36	- 9.44	62.00	3.10
2.84	- 3.08	94.50	4.72	9.45	- 9.53	61.00	3.05
3.09	- 3.34	94.00	4.70	9.54	- 9.61	60.00	3.00
3.35	- 3.59	93.50	4.67	9.62	- 9.70	59.00	2.95
3.60	- 3.84	93.00	4.65	9.71	- 9.78	58.00	2.90
3.85	- 4.08	92.50	4.62	9.79	- 9.86	57.00	2.85
4.09	- 4.33	92.00	4.60	9.87	- 9.94	56.00	2.80
4.34	- 4.57	91.50	4.57	9.95	- 10.02	55.00	2.75
4.58	- 4.82	91.00	4.55	10.03	- 10.10	54.00	2.70
4.83	- 5.06	90.50	4.52	10.11	- 10.18	53.00	2.65
5.07	- 5.30	90.00	4.50	10.19	- 10.25	52.00	2.60
5.31	- 5.51	89.50	4.47	10.26	- 10.33	51.00	2.55
5.52	- 5.70	89.00	4.45	10.34	- 10.40	50.00	2.50
5.71	- 5.85	88.50	4.42	10.41	- 10.55	48.00	2.40
5.86	- 6.00	88.00	4.40	10.56	- 10.70	46.00	2.30
6.01	- 6.13	87.50	4.37	10.71	- 10.86	44.00	2.20
6.14	- 6.25	87.00	4.35	10.87	- 11.02	42.00	2.10
6.26	- 6.36	86.50	4.32	11.03	- 11.19	40.00	2.00
6.37	- 6.47	86.00	4.30	11.20	- 11.36	38.00	1.90
6.48	- 6.58	85.50	4.27	11.37	- 11.54	36.00	1.80
6.59	- 6.67	85.00	4.25	11.55	- 11.72	34.00	1.70
6.68	- 6.77	84.50	4.22	11.73	- 11.91	32.00	1.60
6.78	- 6.86	84.00	4.20	11.92	- 12.11	30.00	1.50
6.87	- 6.95	83.50	4.17	12.12	- 12.33	28.00	1.40
6.96	- 7.03	83.00	4.15	12.34	- 12.55	26.00	1.30
7.04	- 7.11	82.50	4.12	12.56	- 12.78	24.00	1.20
7.12	- 7.19	82.00	4.10	12.79	- 13.04	22.00	1.10
7.20	- 7.27	81.50	4.07	13.05	- 13.31	20.00	1.00
7.28	- 7.35	81.00	4.05	13.32	- 13.61	18.00	0.90
7.36	- 7.42	80.50	4.02	13.62	- 13.94	16.00	0.80
7.43	- 7.49	80.00	4.00	13.95	- 14.33	14.00	0.70
7.50	- 7.63	79.00	3.95	14.34	- 14.80	12.00	0.60
7.64	- 7.76	78.00	3.90	14.81	- 15.50	10.00	0.50
7.77	- 7.89	77.00	3.85	15.51	- 16.47	8.00	0.40
7.90	- 8.02	76.00	3.80	16.48	- 17.46	6.00	0.30
8.03	- 8.14	75.00	3.75	17.47	- 18.48	4.00	0.20
8.15	- 8.25	74.00	3.70	18.49	- 19.53	2.00	0.10
8.26	- 8.37	73.00	3.65	ABOVE	19.53	0.0	0.0

Measured Component Index Table

## OUTPULSER SEIZURE FAILURES

PERFORMANCE FROM	TO	COMP. INDEX	INDEX POINTS	PERFORMANCE FROM	TO	COMP. INDEX	INDEX POINTS
0.0	- 1.00	100.00	5.00	79.55	- 80.59	72.00	3.60
1.01	- 3.52	99.50	4.97	80.60	- 81.61	71.00	3.55
3.53	- 6.03	99.00	4.95	81.62	- 82.60	70.00	3.50
6.04	- 8.53	98.50	4.92	82.61	- 83.58	69.00	3.45
8.54	- 11.03	98.00	4.90	83.59	- 84.53	68.00	3.40
11.04	- 13.52	97.50	4.87	84.54	- 85.46	67.00	3.35
13.53	- 16.00	97.00	4.85	85.47	- 86.37	66.00	3.30
16.01	- 18.47	96.50	4.82	86.38	- 87.26	65.00	3.25
18.48	- 20.94	96.00	4.80	87.27	- 88.13	64.00	3.20
20.95	- 23.40	95.50	4.77	88.14	- 88.99	63.00	3.15
23.41	- 25.85	95.00	4.75	89.00	- 89.83	62.00	3.10
25.86	- 28.30	94.50	4.72	89.84	- 90.66	61.00	3.05
28.31	- 30.74	94.00	4.70	90.67	- 91.48	60.00	3.00
30.75	- 33.17	93.50	4.67	91.49	- 92.28	59.00	2.95
33.18	- 35.59	93.00	4.65	92.29	- 93.07	58.00	2.90
35.60	- 38.01	92.50	4.62	93.08	- 93.85	57.00	2.85
38.02	- 40.42	92.00	4.60	93.86	- 94.62	56.00	2.80
40.43	- 42.83	91.50	4.57	94.63	- 95.37	55.00	2.75
42.84	- 45.22	91.00	4.55	95.38	- 96.12	54.00	2.70
45.23	- 47.62	90.50	4.52	96.13	- 96.85	53.00	2.65
47.63	- 50.00	90.00	4.50	96.86	- 97.58	52.00	2.60
50.01	- 52.12	89.50	4.47	97.59	- 98.29	51.00	2.55
52.13	- 53.88	89.00	4.45	98.30	- 99.00	50.00	2.50
53.89	- 55.42	88.50	4.42	99.01	-100.42	48.00	2.40
55.43	- 56.80	88.00	4.40	100.43	-101.88	46.00	2.30
56.81	- 58.07	87.50	4.37	101.89	-103.38	44.00	2.20
58.08	- 59.25	87.00	4.35	103.39	-104.93	42.00	2.10
59.26	- 60.35	86.50	4.32	104.94	-106.52	40.00	2.00
60.36	- 61.40	86.00	4.30	106.53	-108.17	38.00	1.90
61.41	- 62.39	85.50	4.27	108.18	-109.87	36.00	1.80
62.40	- 63.33	85.00	4.25	109.88	-111.63	34.00	1.70
63.34	- 64.24	84.50	4.22	111.64	-113.47	32.00	1.60
64.25	- 65.11	84.00	4.20	113.48	-115.40	30.00	1.50
65.12	- 65.95	83.50	4.17	115.41	-117.41	28.00	1.40
65.96	- 66.77	83.00	4.15	117.42	-119.54	26.00	1.30
66.78	- 67.56	82.50	4.12	119.55	-121.79	24.00	1.20
67.57	- 68.32	82.00	4.10	121.80	-124.21	22.00	1.10
68.33	- 69.06	81.50	4.07	124.22	-126.82	20.00	1.00
69.07	- 69.79	81.00	4.05	126.83	-129.68	18.00	0.90
69.80	- 70.49	80.50	4.02	129.69	-132.89	16.00	0.80
70.50	- 71.18	80.00	4.00	132.90	-136.60	14.00	0.70
71.19	- 72.51	79.00	3.95	136.61	-141.20	12.00	0.60
72.52	- 73.79	78.00	3.90	141.21	-148.00	10.00	0.50
73.80	- 75.02	77.00	3.85	148.01	-157.58	8.00	0.40
75.03	- 76.21	76.00	3.80	157.59	-167.26	6.00	0.30
76.22	- 77.35	75.00	3.75	167.27	-177.06	4.00	0.20
77.36	- 78.46	74.00	3.70	177.07	-186.97	2.00	0.10
78.47	- 79.54	73.00	3.65	ABOVE	186.97	0.0	0.0

Measured Component Index Table

## SAMA RECORDER FAILURES

PERFORMANCE		COMP. INDEX	INDEX POINTS	PERFORMANCE		COMP. INDEX	INDEX POINTS
FROM	TO			FROM	TO		
0.0	- 0.10	100.00	5.00	7.81	- 7.90	72.00	3.60
0.11	- 0.34	99.50	4.97	7.91	- 8.00	71.00	3.55
0.35	- 0.58	99.00	4.95	8.01	- 8.10	70.00	3.50
0.59	- 0.83	98.50	4.92	8.11	- 8.19	69.00	3.45
0.84	- 1.07	98.00	4.90	8.20	- 8.29	68.00	3.40
1.08	- 1.31	97.50	4.87	8.30	- 8.38	67.00	3.35
1.32	- 1.55	97.00	4.85	8.39	- 8.47	66.00	3.30
1.56	- 1.79	96.50	4.82	8.48	- 8.55	65.00	3.25
1.80	- 2.03	96.00	4.80	8.56	- 8.64	64.00	3.20
2.04	- 2.27	95.50	4.77	8.65	- 8.72	63.00	3.15
2.28	- 2.51	95.00	4.75	8.73	- 8.80	62.00	3.10
2.52	- 2.75	94.50	4.72	8.81	- 8.89	61.00	3.05
2.76	- 2.99	94.00	4.70	8.90	- 8.97	60.00	3.00
3.00	- 3.23	93.50	4.67	8.98	- 9.04	59.00	2.95
3.24	- 3.47	93.00	4.65	9.05	- 9.12	58.00	2.90
3.48	- 3.71	92.50	4.62	9.13	- 9.20	57.00	2.85
3.72	- 3.95	92.00	4.60	9.21	- 9.27	56.00	2.80
3.96	- 4.19	91.50	4.57	9.28	- 9.35	55.00	2.75
4.20	- 4.42	91.00	4.55	9.36	- 9.42	54.00	2.70
4.43	- 4.66	90.50	4.52	9.43	- 9.49	53.00	2.65
4.67	- 4.90	90.00	4.50	9.50	- 9.56	52.00	2.60
4.91	- 5.11	89.50	4.47	9.57	- 9.63	51.00	2.55
5.12	- 5.28	89.00	4.45	9.64	- 9.70	50.00	2.50
5.29	- 5.44	88.50	4.42	9.71	- 9.84	48.00	2.40
5.45	- 5.57	88.00	4.40	9.85	- 9.98	46.00	2.30
5.58	- 5.70	87.50	4.37	9.99	- 10.13	44.00	2.20
5.71	- 5.81	87.00	4.35	10.14	- 10.28	42.00	2.10
5.82	- 5.92	86.50	4.32	10.29	- 10.43	40.00	2.00
5.93	- 6.02	86.00	4.30	10.44	- 10.60	38.00	1.90
6.03	- 6.12	85.50	4.27	10.61	- 10.76	36.00	1.80
6.13	- 6.21	85.00	4.25	10.77	- 10.93	34.00	1.70
6.22	- 6.30	84.50	4.22	10.94	- 11.11	32.00	1.60
6.31	- 6.39	84.00	4.20	11.12	- 11.30	30.00	1.50
6.40	- 6.47	83.50	4.17	11.31	- 11.50	28.00	1.40
6.48	- 6.55	83.00	4.15	11.51	- 11.71	26.00	1.30
6.56	- 6.63	82.50	4.12	11.72	- 11.93	24.00	1.20
6.64	- 6.70	82.00	4.10	11.94	- 12.16	22.00	1.10
6.71	- 6.77	81.50	4.07	12.17	- 12.42	20.00	1.00
6.78	- 6.84	81.00	4.05	12.43	- 12.70	18.00	0.90
6.85	- 6.91	80.50	4.02	12.71	- 13.01	16.00	0.80
6.92	- 6.98	80.00	4.00	13.02	- 13.38	14.00	0.70
6.99	- 7.11	79.00	3.95	13.39	- 13.83	12.00	0.60
7.12	- 7.24	78.00	3.90	13.84	- 14.50	10.00	0.50
7.25	- 7.36	77.00	3.85	14.51	- 15.45	8.00	0.40
7.37	- 7.47	76.00	3.80	15.46	- 16.41	6.00	0.30
7.48	- 7.58	75.00	3.75	16.42	- 17.37	4.00	0.20
7.59	- 7.69	74.00	3.70	17.38	- 18.33	2.00	0.10
7.70	- 7.80	73.00	3.65	ABOVE	18.33	0.0	0.0

Measured Component Index Table

## IDENTIFIER 2TF/2AF

PERFORMANCE		COMP.	INDEX	PERFORMANCE		COMP.	INDEX
FROM	TO	INDEX	POINTS	FROM	TO	INDEX	POINTS
0.0	- 2.00	100.00	10.00	191.18	-193.69	72.00	7.20
2.01	- 8.04	99.50	9.95	193.70	-196.14	71.00	7.10
8.05	- 14.06	99.00	9.90	196.15	-198.54	70.00	7.00
14.07	- 20.07	98.50	9.85	198.55	-200.88	69.00	6.90
20.08	- 26.06	98.00	9.80	200.89	-203.17	68.00	6.80
26.07	- 32.04	97.50	9.75	203.18	-205.40	67.00	6.70
32.05	- 38.00	97.00	9.70	205.41	-207.59	66.00	6.60
38.01	- 43.95	96.50	9.65	207.60	-209.74	65.00	6.50
43.96	- 49.88	96.00	9.60	209.75	-211.85	64.00	6.40
49.89	- 55.80	95.50	9.55	211.86	-213.91	63.00	6.30
55.81	- 61.71	95.00	9.50	213.92	-215.94	62.00	6.20
61.72	- 67.60	94.50	9.45	215.95	-217.94	61.00	6.10
67.61	- 73.48	94.00	9.40	217.95	-219.90	60.00	6.00
73.49	- 79.34	93.50	9.35	219.91	-221.83	59.00	5.90
79.35	- 85.19	93.00	9.30	221.84	-223.73	58.00	5.80
85.20	- 91.02	92.50	9.25	223.74	-225.60	57.00	5.70
91.03	- 96.85	92.00	9.20	225.61	-227.45	56.00	5.60
96.86	-102.66	91.50	9.15	227.46	-229.27	55.00	5.50
102.67	-108.45	91.00	9.10	229.28	-231.06	54.00	5.40
108.46	-114.23	90.50	9.05	231.07	-232.83	53.00	5.30
114.24	-120.00	90.00	9.00	232.84	-234.57	52.00	5.20
120.01	-125.12	89.50	8.95	234.58	-236.30	51.00	5.10
125.13	-129.36	89.00	8.90	236.31	-238.00	50.00	5.00
129.37	-133.08	88.50	8.85	238.01	-241.43	48.00	4.80
133.09	-136.41	88.00	8.80	241.44	-244.94	46.00	4.60
136.42	-139.47	87.50	8.75	244.95	-248.55	44.00	4.40
139.48	-142.31	87.00	8.70	248.56	-252.27	42.00	4.20
142.32	-144.97	86.50	8.65	252.28	-256.10	40.00	4.00
144.98	-147.49	86.00	8.60	256.11	-260.06	38.00	3.80
147.50	-149.87	85.50	8.55	260.07	-264.15	36.00	3.60
149.88	-152.15	85.00	8.50	264.16	-268.41	34.00	3.40
152.16	-154.34	84.50	8.45	268.42	-272.83	32.00	3.20
154.35	-156.44	84.00	8.40	272.84	-277.46	30.00	3.00
156.45	-158.46	83.50	8.35	277.47	-282.31	28.00	2.80
158.47	-160.42	83.00	8.30	282.32	-287.43	26.00	2.60
160.43	-162.32	82.50	8.25	287.44	-292.86	24.00	2.40
162.33	-164.16	82.00	8.20	292.87	-298.67	22.00	2.20
164.17	-165.95	81.50	8.15	298.68	-304.95	20.00	2.00
165.96	-167.69	81.00	8.10	304.96	-311.84	18.00	1.80
167.70	-169.39	80.50	8.05	311.85	-319.56	16.00	1.60
169.40	-171.05	80.00	8.00	319.57	-328.51	14.00	1.40
171.06	-174.26	79.00	7.90	328.52	-339.59	12.00	1.20
174.27	-177.33	78.00	7.80	339.60	-356.00	10.00	1.00
177.34	-180.29	77.00	7.70	356.01	-379.15	8.00	0.80
180.30	-183.14	76.00	7.60	379.16	-402.52	6.00	0.60
183.15	-185.90	75.00	7.50	402.53	-426.12	4.00	0.40
185.91	-188.57	74.00	7.40	426.13	-449.94	2.00	0.20
188.58	-191.17	73.00	7.30	ABOVE	449.94	0.0	0.0

Measured Component Index Table

## SAMA SS PLUS ID 2TF

PERFORMANCE		COMP. INDEX	INDEX POINTS	PERFORMANCE		COMP. INDEX	INDEX POINTS
FROM	TO			FROM	TO		
0.0	- 6.00	100.00	10.00	49.12	- 49.69	72.00	7.20
6.01	- 7.57	99.50	9.95	49.70	- 50.26	71.00	7.10
7.58	- 9.11	99.00	9.90	50.27	- 50.82	70.00	7.00
9.12	- 10.62	98.50	9.85	50.83	- 51.36	69.00	6.90
10.63	- 12.11	98.00	9.80	51.37	- 51.89	68.00	6.80
12.12	- 13.57	97.50	9.75	51.90	- 52.41	67.00	6.70
13.58	- 15.00	97.00	9.70	52.42	- 52.92	66.00	6.60
15.01	- 16.41	96.50	9.65	52.93	- 53.42	65.00	6.50
16.42	- 17.80	96.00	9.60	53.43	- 53.91	64.00	6.40
17.81	- 19.16	95.50	9.55	53.92	- 54.39	63.00	6.30
19.17	- 20.51	95.00	9.50	54.40	- 54.86	62.00	6.20
20.52	- 21.83	94.50	9.45	54.87	- 55.33	61.00	6.10
21.84	- 23.14	94.00	9.40	55.34	- 55.78	60.00	6.00
23.15	- 24.43	93.50	9.35	55.79	- 56.23	59.00	5.90
24.44	- 25.70	93.00	9.30	56.24	- 56.68	58.00	5.80
25.71	- 26.95	92.50	9.25	56.69	- 57.11	57.00	5.70
26.96	- 28.19	92.00	9.20	57.12	- 57.54	56.00	5.60
28.20	- 29.42	91.50	9.15	57.55	- 57.97	55.00	5.50
29.43	- 30.62	91.00	9.10	57.98	- 58.38	54.00	5.40
30.63	- 31.82	90.50	9.05	58.39	- 58.80	53.00	5.30
31.83	- 33.00	90.00	9.00	58.81	- 59.20	52.00	5.20
33.01	- 34.07	89.50	8.95	59.21	- 59.60	51.00	5.10
34.08	- 34.99	89.00	8.90	59.61	- 60.00	50.00	5.00
35.00	- 35.80	88.50	8.85	60.01	- 60.80	48.00	4.80
35.81	- 36.54	88.00	8.80	60.81	- 61.62	46.00	4.60
36.55	- 37.23	87.50	8.75	61.63	- 62.46	44.00	4.40
37.24	- 37.87	87.00	8.70	62.47	- 63.32	42.00	4.20
37.88	- 38.47	86.50	8.65	63.33	- 64.22	40.00	4.00
38.48	- 39.04	86.00	8.60	64.23	- 65.14	38.00	3.80
39.05	- 39.58	85.50	8.55	65.15	- 66.09	36.00	3.60
39.59	- 40.11	85.00	8.50	66.10	- 67.08	34.00	3.40
40.12	- 40.60	84.50	8.45	67.09	- 68.11	32.00	3.20
40.61	- 41.09	84.00	8.40	68.12	- 69.18	30.00	3.00
41.10	- 41.55	83.50	8.35	69.19	- 70.31	28.00	2.80
41.56	- 42.00	83.00	8.30	70.32	- 71.50	26.00	2.60
42.01	- 42.44	82.50	8.25	71.51	- 72.76	24.00	2.40
42.45	- 42.86	82.00	8.20	72.77	- 74.10	22.00	2.20
42.87	- 43.27	81.50	8.15	74.11	- 75.55	20.00	2.00
43.28	- 43.67	81.00	8.10	75.56	- 77.14	18.00	1.80
43.68	- 44.07	80.50	8.05	77.15	- 78.91	16.00	1.60
44.08	- 44.45	80.00	8.00	78.92	- 80.96	14.00	1.40
44.46	- 45.19	79.00	7.90	80.97	- 83.46	12.00	1.20
45.20	- 45.90	78.00	7.80	83.47	- 87.00	10.00	1.00
45.91	- 46.58	77.00	7.70	87.01	- 91.81	8.00	0.80
46.59	- 47.24	76.00	7.60	91.82	- 96.86	6.00	0.60
47.25	- 47.88	75.00	7.50	96.87	- 102.20	4.00	0.40
47.89	- 48.50	74.00	7.40	102.21	- 107.89	2.00	0.20
48.51	- 49.11	73.00	7.30		ABOVE 107.89	0.0	0.0

Measured Component Index Table

## CODES 5&amp;8 EQUIPMENT

PERFORMANCE		COMP. INDEX	INDEX POINTS	PERFORMANCE		COMP. INDEX	INDEX POINTS
FROM	TO			FROM	TO		
0.0	- 0.10	100.00	20.00	2.50	- 2.53	72.00	14.40
0.11	- 0.19	99.50	19.90	2.54	- 2.56	71.00	14.20
0.20	- 0.27	99.00	19.80	2.57	- 2.59	70.00	14.00
0.28	- 0.36	98.50	19.70	2.60	- 2.62	69.00	13.80
0.37	- 0.44	98.00	19.60	2.63	- 2.65	68.00	13.60
0.45	- 0.52	97.50	19.50	2.66	- 2.68	67.00	13.40
0.53	- 0.60	97.00	19.40	2.69	- 2.71	66.00	13.20
0.61	- 0.68	96.50	19.30	2.72	- 2.73	65.00	13.00
0.69	- 0.76	96.00	19.20	2.74	- 2.76	64.00	12.80
0.77	- 0.83	95.50	19.10	2.77	- 2.79	63.00	12.60
0.84	- 0.91	95.00	19.00	2.80	- 2.81	62.00	12.40
0.92	- 0.98	94.50	18.90	2.82	- 2.84	61.00	12.20
0.99	- 1.05	94.00	18.80	2.85	- 2.87	60.00	12.00
1.06	- 1.12	93.50	18.70	2.88	- 2.89	59.00	11.80
1.13	- 1.19	93.00	18.60	2.90	- 2.92	58.00	11.60
1.20	- 1.26	92.50	18.50	2.93	- 2.94	57.00	11.40
1.27	- 1.33	92.00	18.40	2.95	- 2.96	56.00	11.20
1.34	- 1.40	91.50	18.30	2.97	- 2.99	55.00	11.00
1.41	- 1.47	91.00	18.20	3.00	- 3.01	54.00	10.80
1.48	- 1.53	90.50	18.10	3.02	- 3.03	53.00	10.60
1.54	- 1.60	90.00	18.00	3.04	- 3.06	52.00	10.40
1.61	- 1.66	89.50	17.90	3.07	- 3.08	51.00	10.20
1.67	- 1.71	89.00	17.80	3.09	- 3.10	50.00	10.00
1.72	- 1.76	88.50	17.70	3.11	- 3.14	48.00	9.60
1.77	- 1.80	88.00	17.60	3.15	- 3.19	46.00	9.20
1.81	- 1.83	87.50	17.50	3.20	- 3.24	44.00	8.80
1.84	- 1.87	87.00	17.40	3.25	- 3.28	42.00	8.40
1.88	- 1.90	86.50	17.30	3.29	- 3.33	40.00	8.00
1.91	- 1.94	86.00	17.20	3.34	- 3.39	38.00	7.60
1.95	- 1.97	85.50	17.10	3.40	- 3.44	36.00	7.20
1.98	- 1.99	85.00	17.00	3.45	- 3.49	34.00	6.80
2.00	- 2.02	84.50	16.90	3.50	- 3.55	32.00	6.40
2.03	- 2.05	84.00	16.80	3.56	- 3.61	30.00	6.00
2.06	- 2.08	83.50	16.70	3.62	- 3.67	28.00	5.60
2.09	- 2.10	83.00	16.60	3.68	- 3.74	26.00	5.20
2.11	- 2.12	82.50	16.50	3.75	- 3.81	24.00	4.80
2.13	- 2.15	82.00	16.40	3.82	- 3.88	22.00	4.40
2.16	- 2.17	81.50	16.30	3.89	- 3.96	20.00	4.00
2.18	- 2.19	81.00	16.20	3.97	- 4.05	18.00	3.60
2.20	- 2.21	80.50	16.10	4.06	- 4.15	16.00	3.20
2.22	- 2.24	80.00	16.00	4.16	- 4.26	14.00	2.80
2.25	- 2.28	79.00	15.80	4.27	- 4.40	12.00	2.40
2.29	- 2.32	78.00	15.60	4.41	- 4.60	10.00	2.00
2.33	- 2.35	77.00	15.40	4.61	- 4.87	8.00	1.60
2.36	- 2.39	76.00	15.20	4.88	- 5.15	6.00	1.20
2.40	- 2.43	75.00	15.00	5.16	- 5.44	4.00	0.80
2.44	- 2.46	74.00	14.80	5.45	- 5.76	2.00	0.40
2.47	- 2.49	73.00	14.60	ABOVE	5.76	0.0	0.0

Measured Component Index Table

## CODE 5 FRAME

PERFORMANCE		COMP.	INDEX
FROM	TO	INDEX	POINTS
0.0	- 0.0	100.00	5.00
0.01	- 0.01	99.50	4.97
0.02	- 0.03	99.00	4.95
0.04	- 0.04	98.50	4.92
0.05	- 0.05	98.00	4.90
0.06	- 0.07	97.50	4.87
0.08	- 0.08	97.00	4.85
0.09	- 0.09	96.50	4.82
0.10	- 0.11	96.00	4.80
0.12	- 0.12	95.50	4.77
0.13	- 0.13	95.00	4.75
0.14	- 0.14	94.50	4.72
0.15	- 0.16	94.00	4.70
0.17	- 0.17	93.50	4.67
0.18	- 0.18	93.00	4.65
0.19	- 0.19	92.50	4.62
0.20	- 0.20	92.00	4.60
0.21	- 0.22	91.50	4.57
0.23	- 0.23	91.00	4.55
0.24	- 0.24	90.50	4.52
0.25	- 0.25	90.00	4.50
0.26	- 0.27	89.00	4.45
0.28	- 0.28	88.00	4.40
0.29	- 0.30	87.00	4.35
0.31	- 0.31	86.00	4.30
0.32	- 0.33	84.00	4.20
0.34	- 0.34	82.00	4.10
0.35	- 0.36	80.00	4.00
0.37	- 0.37	78.00	3.90
0.38	- 0.38	76.00	3.80
0.39	- 0.41	72.00	3.60
0.42	- 0.43	68.00	3.40
0.44	- 0.44	64.00	3.20
0.45	- 0.46	60.00	3.00
0.47	- 0.48	56.00	2.80
0.49	- 0.49	52.00	2.60
0.50	- 0.51	48.00	2.40
0.52	- 0.52	44.00	2.20
0.53	- 0.54	40.00	2.00
0.55	- 0.56	36.00	1.80
0.57	- 0.57	32.00	1.60
0.58	- 0.59	28.00	1.40
0.60	- 0.62	24.00	1.20
0.63	- 0.64	20.00	1.00
0.65	- 0.67	16.00	0.80
0.68	- 0.72	12.00	0.60
0.73	- 0.80	8.00	0.40
0.81	- 0.89	4.00	0.20
ABOVE	0.89	0.0	0.0

Measured Component Index Table

**SXS NETWORK SWITCHING PERFORMANCE  
MEASUREMENT PLAN  
PERFORMANCE INDICATORS**

Indicator	A		B		C		D		E	F	G
	Failures	Deductions	Net Failures	Base		Performance	Threshold Level	Soft-Spot			
				Item	Data						
<b>Machine Access</b>											
1 All L.F. Busy					# WKG-LINES						1
2 All O.R. Busy					OR-PC DTS-BH						2
3 Last Trunk Usage											3
<b>Machine Switching</b>											
4 Trunk Outage											4
5 Final Grp > 3% N.C.											5
6 Load Balance											6
7 Switch Outage					TOT. SW.						7
8 Common Equip. Outage					TOT. EQ.						8
<b>Billing</b>											
9 ANI Ident. ITF					OP-PC						9
10 Transv. ITF					TV-PC						10
11 Bulk Bill Free					TV-PC						11
<b>Customer Reports</b>											
12 Code 7					/100 MS						12
13						Total No. of Indicators			Total No. Soft Spot		13

(√)

**MEASURED COMPONENTS**

Component	Max. Points	H		J		K		L		M	N	P	R	
		Failures	Deductions	Net Failures	Base		Performance	Component Index	Index Points					Band
					Item	Data								
<b>Machine Access</b>														
14 Dial Tone Speed	20												14	
<b>Machine Switching</b>														
15 Equip. Irregs.	20					# OF S.O.							15	
16 % R.O./N.C.	15					# OF S.O.							16	
<b>Billing</b>														
17 ANI OPF/SAMA TV	5					OP-PC TV-PC							17	
18 ANI OSF/SAMA REC	5					OP+OSF TV-PC							18	
19 ANI 2TF/SAMA SS + ID	10					OP-PC ID-PC							19	
<b>Customer Reports</b>														
20 Equip. Code 5+8	20					/100 MS							20	
21 Frame Code 5	5					/100 MS							21	
22									Total Pts.				22	
23									Max. Avail. Pts.				23	
24									Total Index				24	

**REMARKS**


	S		T		U		V	
	Prepared by	Office	Division	Company	Checked by	District	Area	Period
25								25
26								26

**Fig. 1—Form E-6424A**

SXS NETWORK SWITCHING PERFORMANCE MEASUREMENT PLAN

		A	B	C	D	E	F	G	H
Measured Component		W E I G H T	Total No. of Offices	Total No. of Ofc. Month Reports	Number and % of Office Mo. Rpt. by Index Band				
					A 98.0 100	B 96.0 97.9	C 90.0 95.9	D <90	
1	MACH. ACC.	Dial Tone							
2		Speed	20	% of Total					
3	MACH. SWITCHING	Equipment Irregularities	20	% of Total					
4		Percent							
5		R.O./N.C.	15	% of Total					
6	BILLING	ANI Outputser							
7		SAMA Transverter	5	% of Total					
8		ANI Outputser Seizure							
9		SAMA Recorder	5	% of Total					
10		ANI Identifier 2TF							
11		SAMA SS+ID 2TF	10	% of Total					
12	CUPS T.T.	Code 5 & 8							
13		Equipment	20	% of Total					
14		Code 5							
15		Frame	5	% of Total					
16		Total							
17		Index	100	% of Total					

BAND D TRENDS

		J	K	L												
Measured Component				Preceding Periods												
				1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	
19	MACH. ACC.	Dial Tone	No. of Offices													
20		Speed	% of Total													
21	MACH. SWITCHING	Equipment Irregularities	No. of Offices													
22			% of Total													
23		Percent	No. of Offices													
24		R.O./N.C.	% of Total													
25	BILLING	ANI Outputser	No. of Offices													
26		SAMA Transverter	% of Total													
27		ANI Outputser Seizure	No. of Offices													
28		SAMA Recorder	% of Total													
29		ANI Identifier 2TF	No. of Offices													
30		SAMA SS+ID 2TF	% of Total													
31	CUPS T.T.	Code 5 & 8	No. of Offices													
32		Equipment	% of Total													
33		Code 5	No. of Offices													
34		Frame	% of Total													
35		Total	No. of Offices													
36		Index	% of Total													

M	N	P	Q	R	S
Office	District	Division	Area	Company	Report Period

Fig. 2—Form E-6424B (Sheet 1 of 2)

**SXS NETWORK SWITCHING PERFORMANCE MEASUREMENT PLAN**

**PERFORMANCE INDICATORS**

	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF
	Machine Access			Machine Switching					Billing			CTR	
	All L.F. Busy	All O.R. Busy	Last Trunk Usage	Trunk Outage	Final Group > 3% N.C.	Load Bal.	Switch Outage	Common Equip. Outage	ANI SAMA ID 1TF	TV ITF	Bulk Bill Free	Code 7	
38	No. Office Months												
39	No. Soft Spot												

**BAND D OFFICES  
This Period**

	AG	AH	AJ	AK	AL	AM	AN	AP	AQ	AR	AS	AT
Office (or Month)	No. of Times in 12 Prev. Pds.	Measured Component Index								Performance Indicators		
		Machine Access		Machine Switching		Billing			Customer Reports		Total No. Soft Spot	Total No. of Ind.
		Dial Tone Speed	E.I.	% R.O./N.C.	ANI OFF SAMA TV	ANI OSF SAMA REC	ANI ID 2TF SAMA SS+2TF	Code 5 & 8 Equip.	Code 5 Frame			
40												
41												
42												
43												
44												
45												
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**REMARKS**


	M	N	P	Q	R	S
37	Office	District	Division	Area	Company	Report Period

Fig. 2—Form E-6424B (Sheet 2 of 2)

