subject: Customer Telephone Facilities - 805A PBX -
Traffic Business Services Facilities
Engineering Information

⬤ AT&T

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COPY FOR:
JACK ADAMS

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American Telephone &
Telegraph Company
195 Broadway
New York, N.Y. 10007
Phone (212) 393-9800

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to: General Traffic Managers (Copies sent to General Switching Managers)

from: Traffic Operations Director - Business Services

synopsis: Transmits preliminary traffic facilities information on new 805A
(57 line) PBX.

* * *

The 805A PBX is a small customer telephone system designed to be
competitive with non-Bell manufacturers' system below 60 PBX lines.
The 805A is designed to provide Series 100 PBX features only.

A field trial of the system will be conduc‍ted during the 1st Quarter
of 1971 with the 1st production systems being ‍available later in the
year.

The attached notes are preliminary and are subject to changes resulting
from the field trial. However, the features and traffic information
described is adequate to meet Traffic Business Services responsibilities
in the vehicle selection process where a customer's size and calling
characteristics warrant.

The attached notes fulfill the Traffic Business Services Facilities
Committee request that preliminary information, on new developments,
be sent to the Associated Companies as soon as possible even though
updating may be required before the system is offered as a standard
serving vehicle.

Traffic Operations Director

Attachment

GENERAL

The 805A PBX is a single cabinet common control PBX system employing a crossbar switching single stage network. Therefore, the CCS capacity of the system is equal to the CCS capacity of the trunk assignment. A single 14 or 15-type console is used for the attendant facility with no provision being made for switchboard operation.

The console or station equipment may be equipped with either a rotary dial or TOUCH-TONE ®. Additional information on the 805A PBX system may be found in BSP 981-709-100 and BSP 553-205-300.

FEATURES

The 805A PBX is arranged for full Series 100 service:

1. All trunks will directly terminate on keys at the console. Attendant console assignments are shown in Figure A.

2. Direct outward dialing: on a dial "9" basis.

3. Station-to-station calling: on a two-digit basis.

4. Station hunting: full flexibility will be available, i.e., no limit to the number of hunting groups, or lines in a group. Hunting will proceed in one direction, and will terminate at the last line in the group, i.e., circular hunting will not be available. Hunting arrangements will be wired in at time of installation.

5. Call transfer - attendant: transfer on both incoming and outgoing local central office trunk calls will be possible.

6. Restriction from outgoing calls: two classes of service are available: dial "9" restriction
   no restriction
   Toll denial will not be available.

7. Night Service: up to four stations may be arranged for night service operation, with the night service mode controlled by a console key. The stations are wired in at time of installation. Any station may be arranged for night service operation, and the assignment is fixed, not flexible. When in the night service mode, operation of a ground start key will be required for an outgoing call.

8. Power failure transfer: the same stations arranged for night service operation will be the power failure transfer stations. Ground start key operation will be required for outgoing calls when in the transfer mode.

TOUCH-TONE calling will be available on an optional basis. Tie, FX and WATS trunks, and attendant key access to a customer provided paging system will be optionally available. Recorded Telephone Dictation, Code Call and PBX Interface trunks cannot be used. The 805A will not be arranged for reserve power operation.

NUMBERING PLAN

The recommended numbering plan for the 805A PBX is:

> 0 - attendant
> 1 - vacant
> 2X through 5X - stations
> 6,7,8 - miscellaneous trunk groups, i.e.,
>   Tie, FX, WATS
> 9 - local central office trunks

The digit "8" should not be used for trunk access until it is required for the fourth group.

CAPACITY

The maximum physical capacity of the system is 57 lines which, along with 2 attendant lines, terminate on the verticals of six 10 x 10 crossbar switches. All trunks and registers terminate on the horizontal of the crossbar switches including the intercom trunks which require two appearances for each of the four intercom trunks. A basic 805A system consists of a switching network, 5 station lines, 1 register, 1 attendant line, 2 intercom trunks and 2 central office trunks. The basic system is growable in increments of 5 lines up to 19 lines, 2 registers, 4 intercom trunks and 12 central office trunks. The maximum system capacity of 57 lines and 12 central office trunks is obtained by the addition of a network and a circuit pack carrier which requires four additional crossbar switches.

Traffic sensitive capacities at maximum line fills are shown in the following table.

	19-Line System	57-Line System	
Central Office Trunks	12 Note 3	10	12 Notes 1,2,3
Station Lines	19	57	57
Crossbar Switches	2	6	6
Attendant Consoles	1	1	1
Attendant Lines	1	2	2
Intercom Trunks	4	4	3
Common Control	1	1	1
Register	2	2	2
CCS/Line	10.7	3.5	* Capacity is determined by trunk group arrangement.

Note 1 - One CO trunk functions as a 1-way incoming.
Note 2 - Two CO trunks are 1-way incoming, or in different
        trunk group.
Note 3 - When CO trunks 11 and 12 are required only 3
        intercom trunks can be provided.

The system is limited to four separate trunk groups accessed by a single
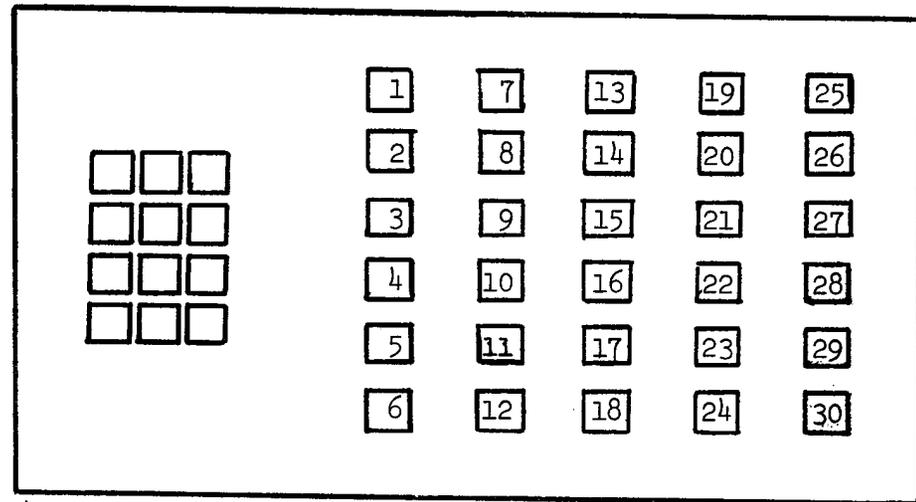digit with no more than 10 trunks in any given trunk group.

TRAFFIC MEASUREMENT

        The 805A is arranged for use with the TMS1A. Usage measurements
can be made on the CO trunks, Intercom trunks and the registers.

805A Console Key Assignment

Console Key	Circuit Assigned
1	N (Night)
2	POS RLS
3	TRFR
4	REL DEST/FL
5	MN ALM/HOLD
6	MJ ALM/START
7	Attendant Line 1
8	Attendant Line 2
9	CO Trunk 1
10	CO Trunk 2
11	CO Trunk 3
12	CO Trunk 4
13	CO Trunk 5
14	CO Trunk 6
15	CO Trunk 7
16	CO Trunk 8
17	CO Trunk 9
18	CO Trunk 10
19	CO Trunk 11
20	CO Trunk 12
21-30	Unassigned

Keys 1-6: Permanently Assigned Control Keys

14 or 15-Type Console Key Numbering