HYBREX

The Friendly **HYBR**id **EX**change

G1-824
G2-1648

Digital Telephone System
ISDN Digital Telephone System

Installation & Programming Manual

Notification

Notification is hereby given that Auto Telecom Company Ltd. reserves the right to modify, change, update or revise this document from time to time as required without the prior obligation to notify any person, company or organization. Further, Auto Telecom makes no warranty or representation, either express or implied, with respect to merchantability, or fitness of its products for a particular purpose.

IMPORTANT SAFETY INSTRUCTIONS

Installation Safety Precautions:
1. Never install telephone wiring during a lightning storm.
2. Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
3. Never touch un-insulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
4. Use caution when installing or modifying telephone lines.

The *HYBREX* G1-824 utilizes a 3-pin grounding power supply cord. This cord is not to be attached to any building surfaces. When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

1. Read and understand all instructions.
2. Follow all warnings and instruction marked on the product.
3. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this product near water, for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool.
5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
6. Slots and openings in the cabinet and the back or bottom are provided for ventilation, to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the product on the bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation unless proper ventilation is provided.
7. This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home or office, consult your dealer or local power company.
8. The socket-outlet shall be installed near the equipment and shall be easily accessible.
9. This product is equipped with a three wire grounding type plug, this plug will only fit into a grounding type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding type plug.
10. Do not allow anything to rest on the power cord. Do not locate this product where the cord will be damaged by persons walking on it.

11. Do not overload wall outlets and extension cords as this can result in the risk of fire or electric shock.
12. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind on the product.
13. To reduce the risk of electric shock, do not disassemble this product, but take it to a qualified service man when some service or repair work is required. Opening or removing covers may expose you to dangerous voltages or other risks. Incorrect reassemble can cause electric shock when the appliance is subsequently used.
14. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
    A. When the power supply cord or plug is damaged or frayed.
    B. If liquid has been spilled into the product.
    C. If the product has been exposed to rain or water.
    D. If the product does not operate normally by following the operating instructions. Adjust only those control, that are covered by the operating instructions because improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
    E. If the product has been dropped or the cabinet has been damaged.
    F. If the product exhibits a distinct change in performance.
15. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
16. Do not use the telephone to report a gas leak in the vicinity of the leak.

SAVE THESE INSTRUCTIONS

HYBREX G1-824

ISDN Digital Telephone System
General Description - Installation - Programming Manual

Table of Contents

General Description - Introduction

The General Description section contains an easy to understand overview of the *HYBREX*® G1-824 ISDN Digital Telephone System. It is the intent of this document to provide both technical and non-technical readers with information pertaining to the system building blocks, capabilities, key highlights, electrical, physical and environmental characteristics of the *HYBREX* G1-824 ISDN Digital Telephone System.

FCC Rules and Regulation

In compliance with the requirements of Part 68of the Federal Communications Commission Rules and Regulations for connection of terminal system equipment to the telephone network and for your convenience, the following information is presented.

FCC Registration Number

The *HYBREX* G1-824 is registered with the FCC in a dual registration capacity enabling the system to operate as a key system only or as a hybrid system. The FCC Registration Numbers are 3A7TAI-35152-KF-E for key systems registration and 3A7TAI-36015-MF-E for hybrid operation.

The *HYBREX* G2-1648 is registered with the FCC in a dual registration capacity enabling the system to operate as a key system only or as a hybrid system. The FCC Registration Numbers are 3A7TAI-XXXXX-KF-E for key systems registration and 3A7TAI-XXXXX-MF-E for hybrid operation.

Ringer Equivalence Number

Ringer Equivalence 0.3B.

Notification of the Telephone Company

Customers connecting terminal equipment to the telephone network shall, upon request of the Telephone Company, inform the Telephone Company of the particular line(s) to which such connection is made, the FCC registration number and ringer equivalence number (REN) of the registered terminal equipment.

The REN is useful to determine the quantity of devices you may connect to your telephone line and still have all of those devices ring when your telephone number is called. In most, but not all areas, the sum of the REN's of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices you may connect to your line, as determined by the REN, you should contact your local telephone company to determine the maximum REN for your calling area.

This equipment is capable of providing users access to Interstate providers of operator services through the use of access codes. Modification of this equipment by call aggregators to block access dialling codes is a violation of the Telephone Operator Consumers Act of 1990.

Direct Connection to a Party-Line or Coin Operated Telephone Line is Prohibited.

Incidence of Harm to the Telephone Lines

Should terminal equipment cause harm to the Telephone Network, the Telephone Company shall, where practical, notify the customer that service may be temporarily discontinued. However, where prior notice is not practical, the Telephone Company may temporarily discontinue service, if such action is reasonable in the circumstances. In case of such un-notified temporary discontinuance of service, the Telephone Company shall:

(a)	Promptly notify the customer of such temporary discontinuance of service.
(b)	Afford the customer the opportunity to correct the situation which gave rise to the temporary discontinuance.
(c)	Inform the customer of the right to bring a complaint to the FCC pursuant to the procedures

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set out in Subpart E of Part 68 of FCC Telephone Equipment Rules.

Compatibility of the Telephone Network and Terminal Equipment.		
(a)	Availability of telephone interface information.	
	Technical information concerning interface parameters and specifications not specified in FCC Rules, including the number of Ringers which may be connected to a particular line, which is needed to permit Terminal Equipment to operate in a manner compatible with Telephone Company communications facilities, shall be provided by the Telephone Company upon customer's request.	
(b)	Changes in Telephone Company Communications Facilities, Equipment, Operations and Procedures.	
The Telephone Company may make changes in its communications facilities, equipment, operations or procedures where such action is reasonably required in the operation of its business and is not inconsistent with the rules and regulations in FCC Part 68 of the FCC Rules and Regulations. If such changes can be reasonably expected to render any customer Terminal Equipment incompatible with Telephone Company Communications Facilities, or require modification or alteration of such Terminal Equipment, or otherwise materially affect its use or performance, the customer shall be given adequate notice in writing to allow the customer an opportunity to maintain uninterrupted service.		

Radio Frequency Interference
This equipment generates and uses radio frequency energy and if not installed and used properly and in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type-tested and found to comply with the limits for a Class A computing device in accordance with the specification in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, this is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
Re-orient the receiving antenna. Relocate the equipment with respect to the receiver. Move the equipment away from the receiver. Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

CTR 21 (98/482/EC) Declaration Network Compatibility

CTR 21 (98/482/EC) Declaration Network Compatibility,' The equipment has been approved in accordance with Council Decision 98/482/EC for pan-European single terminal connection to the public switched telephone network (PSTN). However, due to differences between the individual PSTN networks provided in different countries, the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN network termination point. In the event of problem, you should contact your equipment supplier in the first instance.'

ISDN Installation

For the ISDN unit (G1/G2-SIU), the G1-824/G2-1648 only offers ISDN S/T interface connection behind an NT1 device. It should not be connected to a "U" interface directly.

Description

The G1-824 is an advanced ISDN Digital hybrid telephone system employing a microprocessor stored program and digitally controlled solid state Time-division switching. The G1-824 system is specifically designed for small business as well as residential applications. At the forefront of the system design is a universal concept to adapting and connecting with a variety of communications devices. Productive **HYBREX** Digital Key Telephones offer thoughtfully designed productive feature access to keep you connected with one another and customers. Auto Telecom technology leads the industry in providing for compatibility with devices such as fax machines, answering machines, cordless phones, computer modems and other office/home equipment.
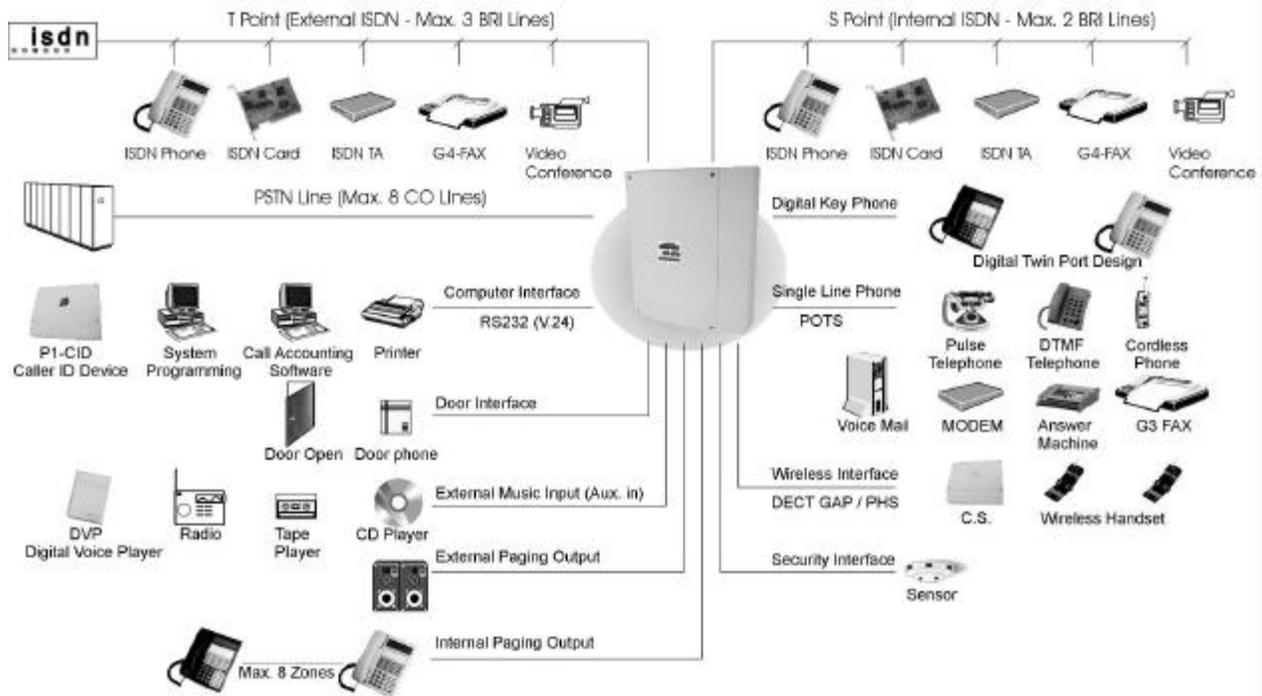
Key highlights of the G1-824 series include:

Economy and Efficiency

The base system is equipped to support two (2) or four (4) CO lines / two ISDN BRI's and eight (8) digital stations. The system may be expanded to a maximum of eight (8) CO lines / three (3) ISDN BRI's. Station cards may be selected to allow practically any combination ranging from all **HYBREX** DK1 Digital Sets to all industry standard Single Line Telephone sets, with any combination of the two types. In addition to being cost effective at the initial phase and for expanding to it's maximum capacity, the G1-824 system also is economical to operate as it consumes about the same amount of electricity as a 60 watt light bulb at full configuration. A maximum of 8 CO lines (or 3 ISDN BRI's) and 24 Extensions can be accommodated. This allows a wide variety of applications for the system to work effectively.

Easy Installation

- "Factory Ready" - All G1-824 Telephone systems are "ready to go" right out of the box. A well thought out default database is factory installed on each system which meets the needs for most installations. This alleviates hours of on site time, minimizing installation costs for both dealer and customer.
- "Small & Compact" - The Key Service Unit's small size takes little space for installation and is about the size of a legal piece of paper.

Easy Maintenance

- Solid-state design minimizes trouble and eliminates periodic maintenance.
- Easy Expansion. Various Interface Cards for simple, modular expansion.
- Versatile programming and options for ease of selection.
- Database Flash Memory Back Up - Customer data is backed up when the power is turned off and there is no battery to replace.
- Battery Back Up (System Operation) - G1-824 systems can be equipped with an optional battery back up which keeps the system operational for up to 1 hour in the case of a commercial power failure.
- Customer Care Programming - Customers and service personnel can easily communicate and perform programming right over the telephone. *HYBREX* telephone systems allow programming and voice conversations to be performed at the same time.
- Advanced software upgrades – Through the RS232 connection, system software can be upgraded easily without replacing any firmware.

Flexibility of System Applications

Unlike other conventional systems in the G1-824 size range, the installer will find an unprecedented range of customer database programmability. In "system parameters" there are extensive options for various timing settings related to features. An array of parameters are programmable for signalling options on outside lines and internal single line telephone sets. The installer may Enable/Disable many system wide features. And in class of service, there are over 20 options for each station providing maximum flexibility for nearly any application.

Varied Extension Alternatives

You can connect an ISDN Modem, ISDN phone, proprietary *HYBREX* DK series Keyphone, Door Phone and conventional industry standard single line sets – Modem, Answering Machine, Cordless phone, etc. directly to the KSU. This feature provides you with the choice to select different extension equipment to suit individual applications.

Digital Twin Port

Install two Digital Keyphones on a single two-wire cable. No Master and Slave difference. Any Keyphone can be plugged in and plugged out with no interference to the other. This feature provides easy cabling, easy expansion and easy maintenance.

Hybrid Phone

No waste of your existing telephone equipment, such as Modems, cordless telephones, Answer machines,…etc., just plug this equipment into the **"Hybrid port" of the Keyphone** and calls can be **automatically transferred** to the equipment when you are busy or do not answer. No extra wiring and programming. This feature provides easy installation and programming-free transfer of calls from the Keyphone to SLT equipment.

Full ISDN features

The G1 system allows you to access two different outside line types (PSTN & ISDN) in one box and enjoy **Full ISDN Features when accessing an ISDN Line** - such as:

- . Call Charge Metering Information
- . Caller Identification
- . Direct Inward Dialling
- . Call Forward Internal / External
- . Call Waiting
- . MSN (Multiple Subscriber Number)
- . Sub-addressing
- . User to User Signalling

You can easily control your budget by using different outside line arrangements.

Liquid Crystal Display

The DK1 Series Telephone Model DK1-21 / DK1-31 is equipped with a large, easy to read LCD display. The LCD is 32 characters total, comprised of 2 rows by 16 characters each. This LCD provides an invaluable tool for simplifying the use of the telephone by identifying the calling extension by name, outside lines by name and self prompting displays for feature access. Station feature usage is made simple with the help of the LCD display. Continuous prompting information is displayed during calls so that users know what to do and when to do it.

32-character LCD Display shows:

• Time	• Last number dialled
• Dialled telephone number	• The status of operation/function
• Voice Mail Messages	• Absent messages
• CO Line Names	• Speed Dial Directory
• Last Number Redial	• Calling Party Number and Name
• Speed dial number	• Input data during system data entry

HYBREX **Telephone Model DK1-21/DK1-21H/DK1-31**

Specifications

MAXIMUM LOOP RESISTANCE/IMPEDANCE	
Key Telephone	Less than 40 ohms 26 AWG / 200 m
Single Line telephone	Less than 800 ohms 26 AWG / 800 m
DoorPhone	Less than 40 ohms
Music Source Input Impedance	600 ohms
Maximum Input	0.775 VRMS
INTERNAL RELAY CONTACTS	
Type	SPST
Rating	1 AMP, 24VDC
Function	Door Switch, Music on Hold, etc
CABLE REQUIREMENTS	
CO/PABX Line	Twisted 1 Pair (2 wires)
ISDN BRI	Twisted 2 Pair (4 wires)
DK1 Digital Key Telephone	Twisted 1 Pair (2 wires)
DoorPhone	Twisted 1 Pair (2 wires)
Door Switch	Twisted 1 Pair (2 wires)
External Sensor	Twisted 1 Pair (2 wires)
External Music Source	Twisted 1 Pair (2 wires)
Single Line Telephone	Twisted 1 Pair (2 wires)

Mechanical Specifications (Key Service Unit)

CABINET DIMENSIONS		
233mm W	76mm D	290mm H
9.17"	2.99"	11.4"
WEIGHT	2.3 Kg (Configuration: 4 x 8)	
	5.0 lbs	

Mechanical Specifications (Battery Back Up Housing)

CABINET DIMENSIONS		
15.5" W	3.0" D	5.75" H
WEIGHT	With Batteries -16 lbs Without Batteries- 4 lbs.	
Mounting Screws	12.25" centre to centre	

Environmental Specifications

	OPERATING CONDITIONS	STORAGE CONDITIONS
Temperature	0º to 45º C (32º to 113º F)	-40º to 66º C (-40º to 150º F)
Humidity	10 to 95% relative Non-condensing	10 to 95% relative non-condensing

Features

System Features

Account Code Capability
Attendant Console Assignment
Attendant Overflow
Automatic Line Access
Automatic Line Search
Automatic Ringdown
Automatic Wake-up
Battery Charger
Behind PABX Operation
Centrex Operation
Class Of Service
CO Line Groups
CO Line Hunting
CO Line Name Programming
CO Line Ring Types
      Linear
      Common Audible
      Circular
      Hunt
Console Assignment
Day/Night Service
      Manual/Automatic Switch
Dial 9 Group
Direct In Line
Dial By Name
Dial Mode Selection(DP/DTMF)
Dial Pulse to DTMF Conversion
Distinctive Ringing
DTMF Signalling
Dual Port Capability
End to End Signalling
Easy Installation and Operation
Flash (Programmable)
Flash Memory Backup Memory
Flexible Expansion
Flexible Ringing Assignment
Flexible Key Group Assignment
Flexible Number Plan 2,3 or 4 Digit
Flexible Time Format 12/24 Hour
Forced Account Code Assignment
Intercom
Intercom Single Digit Assignment
Intercom Ring / Voice Select
Intercom Dialling Restriction

ISDN
      Call Charge Metering Information
      Caller Identification
      Direct Inward Dialling
      Call Forward Internal / External
      Call Waiting
      MSN (Multiple Subscriber Number)
      Sub-addressing
      User to User Signalling
Host PABX Access
Hot line
Line Group Assignment
Loud Bell Assignment
Multiple Attendant Consoles
Multiple Trunk Groups
Night Transfer
On Call Programming
Paging
      Internal
      Zone
      Meet Me
Password Assignment
      DISA
      System programming
      Toll Override
Pause
Pick Up Groups
Power Fail Transfer
Security Code
Single Digit Dialling
Station Group Assignment
Station Hunting
Station Lock
System Speed Dial and Personal Speed Dial
System Date & Time Setting
System Time-Reminder Service
Telephone Directory
Toll Control
      Day / Night
Tone to pulse dialling
Trunk Queuing
Trunk to trunk connections
Uniform Call Distribution
Voice Mail Compatibility

Station Features

Advisory Messages
       System
       Personal
Access to System Programming
Account Code Capability
Auto Hold
Auto Hold Recall
Automatic Call Back
Automatic Answer-Intercom
Automatic Line Access
Automatic Redial
Automatic Volume Increase
Brokers Call
Call Duration Timer (LCD Phones)
Call Waiting
Call Forwarding
       All Calls
       Busy
       No Answer
       Busy / No Answer
       External
Call Pickup
Call Split
Call Transfer
Calling Name Display (LCD Phones)
Calling Number Display (LCD Phones)
Camp On
Chain Dialling
Conference
Dial By Name (LCD Phones)
Dial Access to Attendant
Direct Station Selection
DoorPhone Access
Do Not Disturb (DND)
Dual Color LED
Duration Time Display (LCD Phones)
Executive Override (Barge-In)
External Call Forwarding
Flash (Open Loop Timed Flash)
Hands-free Answer Back
Hearing Aid Compatibility
Headset Compatibility
Hold (Exclusive / System)
Hold Recall
I Hold Indication
I Use Indication
Intercom
Intercom ring / voice interchange
Intercom Step Call
Intercom Voice Announce
Last Number Redial
Message Waiting
Multi-Language Display
On Hook Dialling

Parts & Peripherals

System Modules

Model	Description
G1-408P	KSU with 4 CO lines, 4 Digital twin ports
G1-408i	KSU with 2 ISDN S/T , 4 Digital twin ports
G1-608i	KSU with 3 ISDN S/T , 4 Digital twin ports
G1-TKU-4	Trunk Card : 4 CO lines
G1-TKU1-4	Trunk Card : 4 CO lines / with CLIP (Caller ID) upgrade option
G1-SIU-2	ISDN S/T interface with 2 circuits
G1-SIU-3	ISDN S/T interface with 3 circuits
G1-STC-8	Station Card : 4 Digital Twin-port
G1-SLC1-8	Single Line Card : 8 SLT ports / with CLIP (Caller ID) function
G1-RGU1	Ring Generator Unit for G1-SLC1-8
G1-SLC-8	Single Line Card : 8 SLT ports
G1-RGU	Ring Generator Unit for G1-SLC-8

Type of Phones

Model	Description
DK1-21H	Multifunction Key Telephone. Includes 32 character LCD display, single line telephone port, speakerphone, Handsfree, headset jack, 20 dual color keys and 14 function keys for feature access, DSS, CO Lines and speed dial.
DK1-21	Multifunction Key Telephone. Includes 32 character LCD display, speakerphone, Handsfree, headset jack, 20 dual color keys and 14 function keys for feature access, DSS, CO Lines and speed dial.
DK1-22	Multifunction Key Telephone. Includes speakerphone, Handsfree, headset jack, 20 dual color keys and 14 function keys for feature access, DSS, CO Lines and speed dial.
DK1-31	Multifunction Key Telephone. Includes 32 character LCD display, intercom speakerphone, 20 dual color keys and 14 function keys for feature access, DSS, CO Lines and speed dial.
DK1-33	Multifunction Key Telephone. Includes intercom speakerphone, 8 dual color keys and 14 function keys for feature access, DSS, CO Lines and speed dial.
DK1-SLC	DK1 Keyphone - SLT port for DK1-2x series
DK-SLD	Two Port SLT device – Convert a Digital port to two POTS ports
ACP	Access Control Phone
ACP/RF	Access Control Phone with RF Proximity Card function
PX-Card	RF Proximity Card for ACP/RF
WMU-12	Wall Mount Kit for DK1 Series Telephones

Peripheral Devices

Model	Description
DPU05	Door Phone - 2 Wires
BBOX0	Battery Box without Batteries
BBOX1	Battery Box with Batteries

Optional Interface Cards

Model	Description
G1-VSC	Voice Service Card (60 sec. / 8 voice segments)- Auto Attendant, Wake-up, Message Waiting
G1-MSC	RS232/Relay/Sensor/External Paging Interface
G1-CIC	Caller ID Card for G1-TKU1-4 – Dual Mode (FSK/DTMF)
G1-CIC-F	Caller ID Card for G1-TKU1-4 – FSK Mode
G1-CFC	Conference – 32 parties conference Expansion Card – Expand system from 6 x 16 to 8 x 24

System Installation - Introduction

This section provides directions for installing the system and optional equipment.
The installation must be performed by qualified service personnel.

Main components of the system are:

Key Service Unit, which includes:
- Power Supply Unit (G1-PWU)
- Main Board Unit (G1-MBU / Common Control and four digital twin port circuits)
- Trunk Unit (G1-TKU / G1-SIU)

Optional Expansion Cards:
- Trunk Card (G1-TKU / G1-SIU)
- Digital Station Card (G1-STC – four digital twin port circuits)
- Single Line Station Card (G1-SLC – eight single line port circuits)
- G1-CIC Card (Caller ID Card - four port circuits)
- Conference Card (G1-CFC)
- Multi-Service Card (G1-MSC)
- Voice Service Card (G1-VSC)

NOTE: Please follow the directions step by step. The G1-824 system should be installed in strict accordance with this manual.
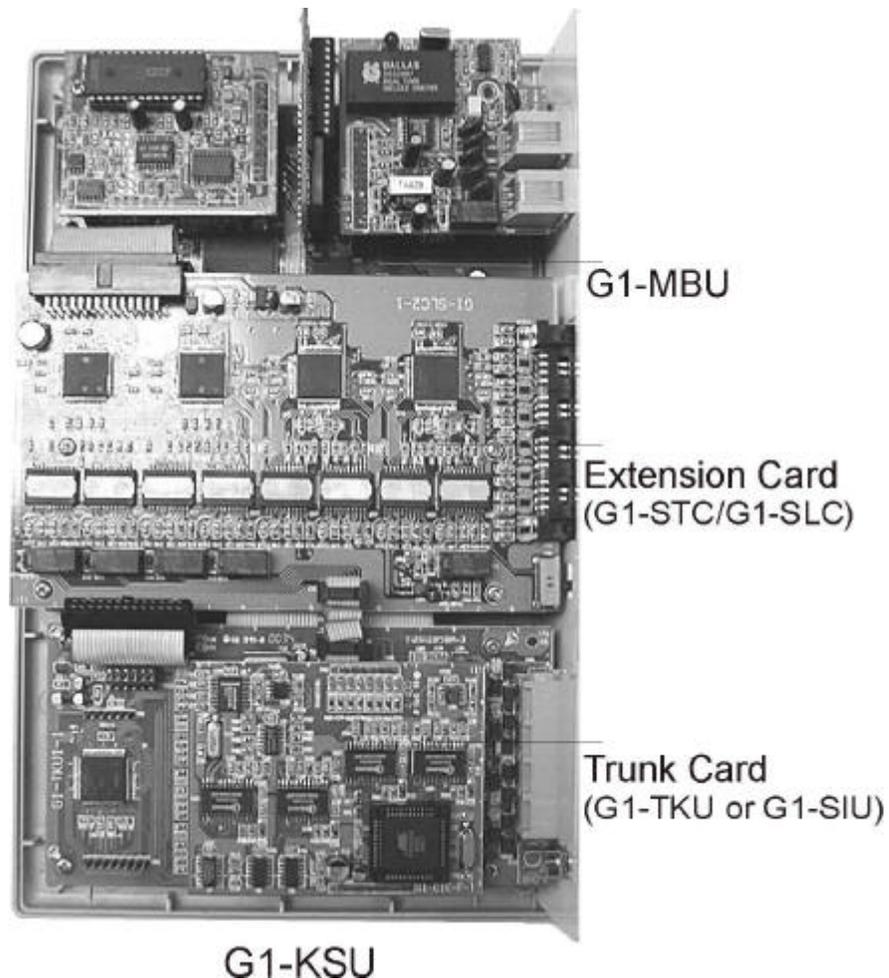
Site Requirements

Location

Choosing the Right Environment

- System should be installed in a clean, dry, secure location. This location must have adequate ventilation, and a temperature from 0 to 45 (32 to 113), with 10% to 95% non-condensing relative humidity. DO NOT install the equipment near sources of static electricity, excessive vibration, or water. Avoid direct sunlight.

Installation Checklist

INSTALLATION REQUIREMENTS	VERIFICATION
MOUNTING SURFACE	Flat surface with adequate space for main cabinet, power supply, wiring and optional Battery Backup cabinet.
AC LINE	AC line should be dedicated exclusively to the system.

POWER OUTLET	Power Outlet must be a
	    3-wire grounded outlet plug, having parallel blades
	    and ground pin.
	Input power Line capacity requirements - 10 amperes.

SURGE PROTECTION	A Surge Protector is recommended on the dedicated AC line.
VENTILATION AND TEMPERATURE	Humidity: 10% to 95% relative non-condensing Temperature:32 to 113 (0 to 45).
EARTH GROUND	A proper ground connection. (14 AWG)
SERVICEABILITY	Lighting conditions and working space adequate for future service.

Equipment Requirements

- Unpack, Check and Verify Equipment - Unpack the telephone equipment boxes and verify the contents in accordance with the packing list provided. If any discrepancies are noticed, please contact Auto Telecom or Authorized Dealers.
- Damaged Boxes - If you notice any damage to the packages, please notify both the shipper and Auto Telecom or Authorized Dealers at once.
- List of parts included in basic KSU box:
    - KSU Main Cabinet
    - Power Supply
    - Mounting Template
    - Mounting Screws
    - Station Quick Connectors
    - Spare Fuses
    - Cable Cover

Installation

Caution   1. **This system should be installed by qualified service personnel.**
                     2. **Do not install the Power Supply unless you have read the following instructions and completed all the installation and wiring.**
                     3. **STATIC SENSITIVE DEVICES! Please handle with care.**

Installing expansion and optional cards

In this step you will be installing printed circuit cards on to header pins of the main board in the basic cabinet. Take your time and extra care to assure the printed circuit cards are properly aligned. After installing each option and expansion card, perform a visual inspection to assure the printed circuit card is installed properly.

1. Position the cabinet on a flat surface like a table or countertop. Avoid doing this on carpet.
2. Remove the 4 screws located at the corners of the cabinet and lift the front cover off.
3. Locate the expansion and option cards and unpack them at this time.

Installing expansion and option cards (continued)

G1-CFC- Conference Card

- Install this card on CN6 of the G1-MBU.
- Be sure that the component side of the G1-CFC is facing in towards right of KSU.
- CFC card is necessary for expanding system from 6 x16 to 8x 24.
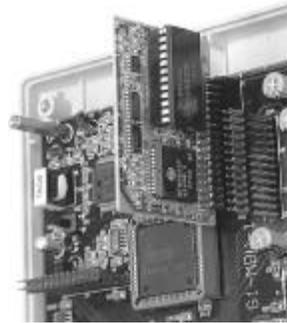
G1-MSC- Multi Service Card

- Align CN1 of the MSC card with CN4 of the G1-MBU.
- Align the hole on the right side of the MSC with the standoff.
- Once aligned push the MSC on the connector.
- Place the screw into the standoff securing the MSC card.
- When installed correctly the connectors should be easily accessible through the main panel.
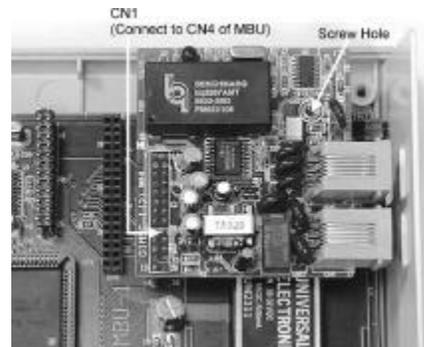
G1-VSC- Voice Service Card

- Align CN1 of the G1-VSC card with CN5 of the G1-MBU.
- Align the hole on the left side of the VSC with the standoff.
- Once aligned push the VSC on the connector.
- Place the screw into the standoff securing the VSC card.
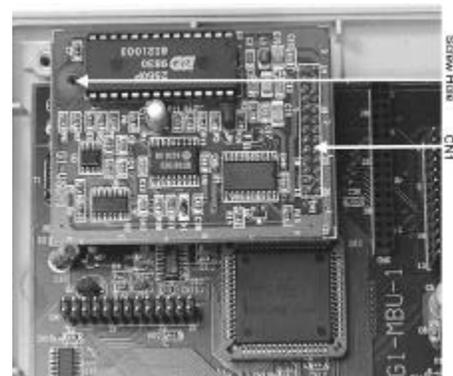
G1-TKU- 4 Port CO Line Card

- Align four holes of G1-TKU with the standoffs on top of the existing G1-TKU or G1-SIU card provided for in the basic key service unit. Once aligned, place the four screws into the standoff securing the G1-TKU card.
- Set SW1 on the newly installed G1-TKU to 'TKU1' position if the basic key service unit was installed with a G1-SIU card already.
- Set SW1 on the newly installed G1-TKU to 'TKU2' position if the basic key service unit was installed with a G1-TKU card already.
- Connect an attached cable between CN1 of G1-TKU to CN3 of G1-MBU.
- Connect an attached cable between CN4 of G1-TKU to CN3 of G1-SLC for power failure transfer.
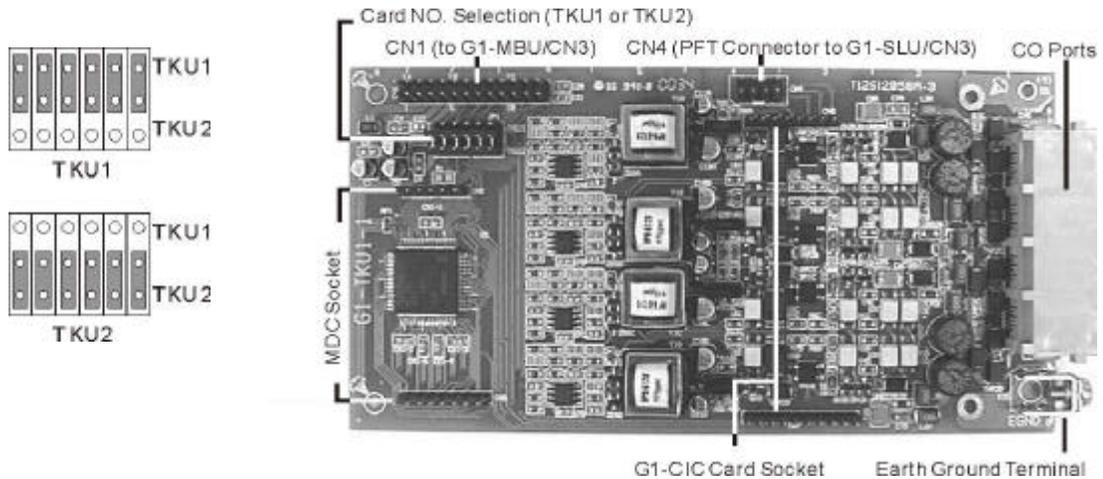
G1-CIC- Caller ID Card

- Align pin connectors of G1-CIC card with the related socket on G1-TKU1 card and then push down G1-CIC on G1-TKU1 Card.
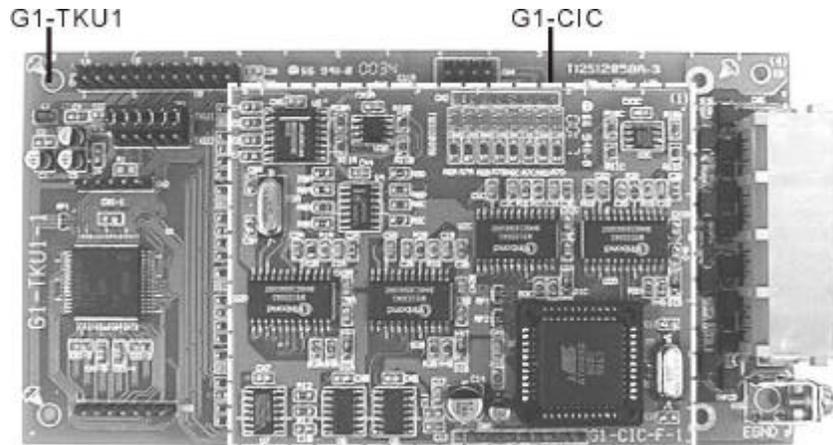
G1-SIU ISDN S/T Interface Card

● If the ISDN interface – G1-SIU is to be installed in the original basic key service unit (G1-408P), the existing G1-TKU needs to be uninstalled first.
● Replace the PVC plate with the attached one on the main panel.
● Align four holes of G1-SIU with the screw holes on the plastic cabinet, place the four standoffs into the holes securing the G1-SIU card.
● Connect an attached cable between CN2 of G1-SIU to CN2 of G1-MBU (or to CN2 of G1-STC.)
● Install G1-TKU on the top of G1-SIU.
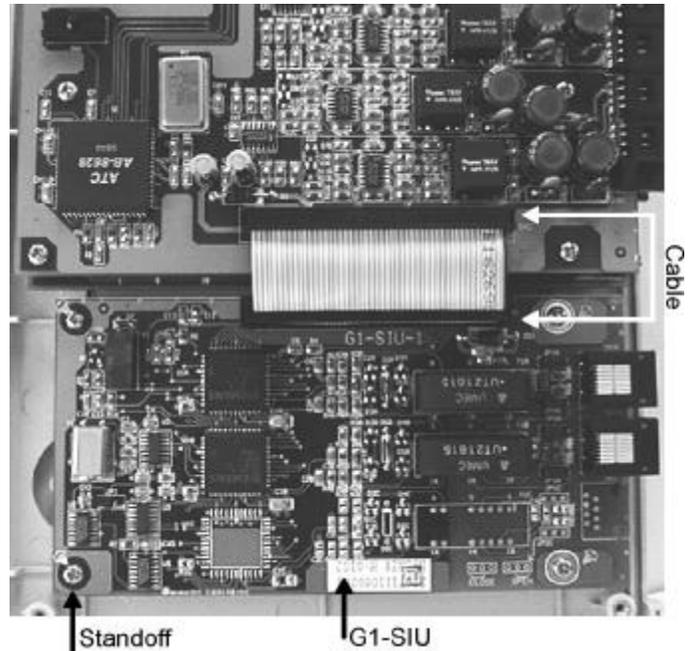
G1-STC Digital Station Adapter Card

For the 1st G1-STC card:
● Set SW2 on G1-STC to 'STC1' position.
● Align CN2 of the G1-STC card with CN2 of the G1-MBU.
● Align four screw holes on G1-STC with the standoff.
● Once aligned push the G1-STC on the connector.
● Place the screw into the standoff securing the G1-STC card.
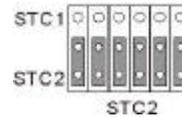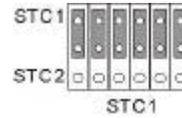
For the 2nd G1-STC card:
● Install G1-CFC card.
● Use the attached three standoffs to replace the original screws on the 1st G1-STC card.
● Set SW2 on the 2nd G1-STC to 'STC2' position.
● Align CN2 of the two G1-STC cards together.
● Align four screw holes on G1-STC with the standoffs.
● Once aligned push the G1-STC on the connector.
● Place the screws into the standoffs securing the G1-STC card.
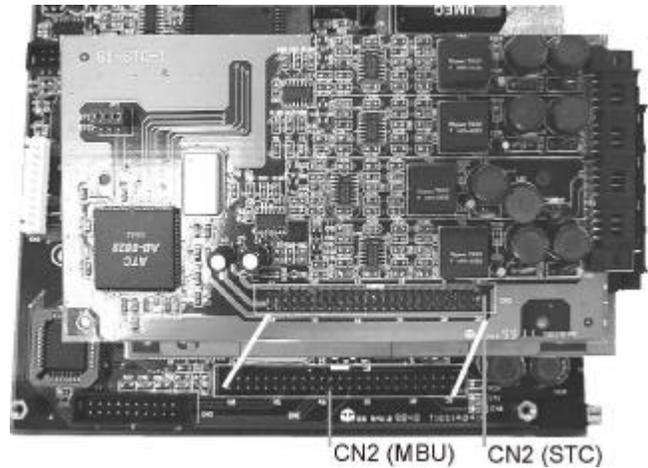
G1-SLC Single Line Station Adapter Card

Install G1-SLC on G1-MBU:
● Connect the attached cable between CN1 of G1-SLC card to CN7 of the G1-MBU.
● Align four screw holes on the G1-SLC with the standoffs.
● Place the screws into the standoffs securing the G1-SLC card.
● Connect the attached cable between CN3 of G1-SLC to CN4 of G1-TKU for power fail transfer. (Power fail Transfer will transfer the CO lines to the first 4 stations of G1-SLC card.)
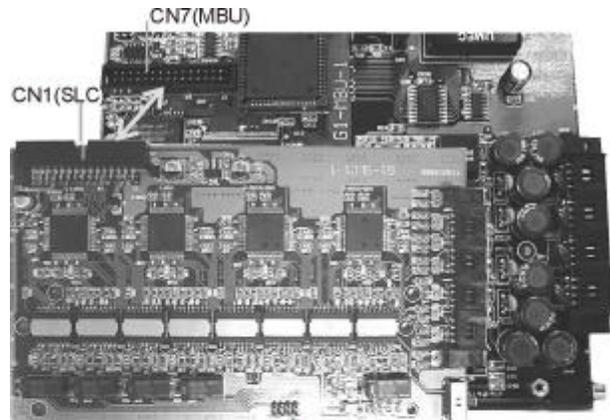
Install G1-SLC on the top of G1-STC:
● Install G1-CFC card.
● Use the attached three standoffs to replace the original screws on the 1st G1-STC card.
● Connect the attached cable between CN1 of G1-SLC card to CN7 of the G1-MBU.
● Align four screw holes on the G1-SLC with the standoffs.
● Place the screws into the standoffs securing the G1-SLC card.
● Connect the attached cable between CN3 of G1-SLC to CN4 of G1-TKU for power fail transfer. (Power fail Transfer will transfer the CO lines to the first 4 stations of G1-SLC card.)
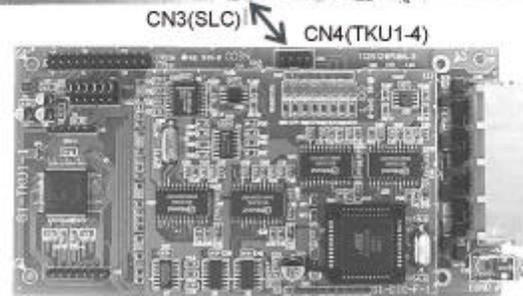
G1-RGU - Ring Generator Unit (for G1-SLC)
● The ring generator installs inside the power supply unit.
● Remove the cover of the power supply by taking out the 4 screws located on each corner.
● Inside the G1-RGU are 4 screws and a connecting cable.
● Align the G1-RGU with the 4 holes and secure by installing the screws provided.
● Install the cable from the G1-RGU to the 4 pin header connector located on the G1-PWU board.
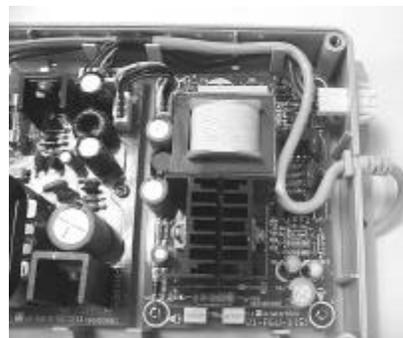
G1-RGU1 - Ring Generator Unit (for G1-SLC1 (CLIP version))

● The ring generator installs inside the power supply unit.
● Remove the cover of the power supply by taking out the 4 screws located on each corner.
● Inside the G1-RGU1 are 4 screws and a connecting cable.
● Align the G1-RGU1 with the 4 holes and secure by installing the screws provided.
● Install the cable from the G1-RGU1 to the 4 pin header connector located on the G1-PWU board.
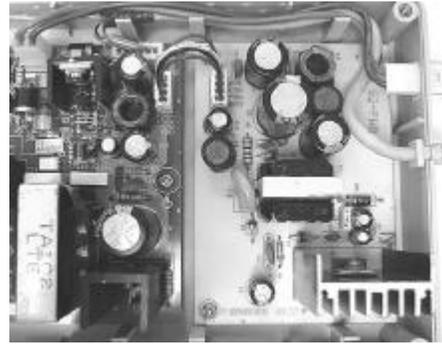
Voltage Selection Check

● Make a check to assure the power supply jumper setting is for the proper voltage.
● When complete, place the power supply cover back on the power supply.
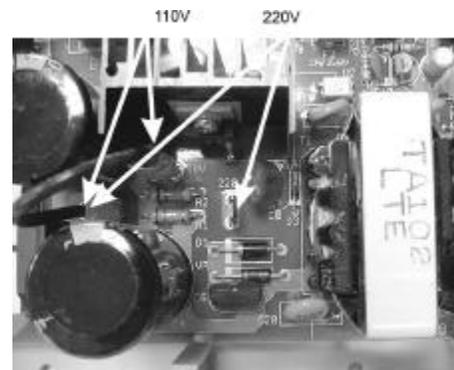
Replace Cover

With the expansion and option cards installed and the battery insulator removed, replace the cover and install the 4 screws removed earlier.

This concludes the installation of expansion and option cards!

Installing the Equipment

Backboard

Be sure to plan and allow enough space to mount and connect the key service unit, power supply and system battery back up if applicable.

Key Service Unit

Use the enclosed paper template to locate the mounting position for the Key Service Unit. Drill appropriately spaced holes and mount the KSU on the wall. When mounting the KSU, make certain that there is adequate room for the system power supply and that the connecting cable between the Power Supply and the KSU will reach the KSU. The same applies for the battery back up unit.

Mounting Tabs

Key Service Unit

Wall or backboard

Power Supply

Dedicated Power Source - The power supply must be connected to a dedicated AC outlet.
Be sure that the third wire earth ground of the AC circuit is connected to a good electrical ground. If a music source is installed, it must be connected to a separate AC circuit rather than the system's dedicated AC line cord.

Check Your Voltage Selection Jumper
Verify that the input voltage and input voltage jumper are correct before you power on the system. The input voltage is set according to the Customer's requirement before shipping. However it is important to verify that the setting is correct prior to initial system power up.
Power Supply voltage options for the unit:
100-VAC: 100 to 120 V AC (50/60Hz) or 240-VAC: 205 to 265 V AC (50/60Hz).

Mount Power Supply
Using screws provided with the system, mount the power supply close to the KSU so that the connector reaches from the Power Supply to the KSU.
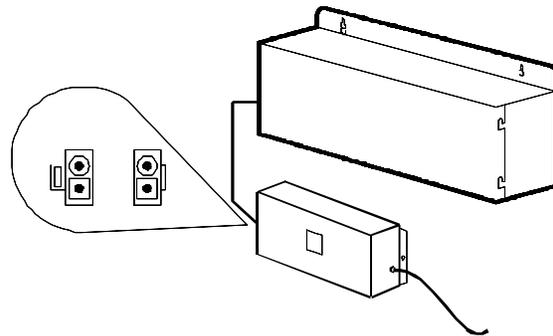
Preparing The External Battery Backup

The Key Service Unit can have two external backup batteries in series (12 volts each) for emergency power when a power failure takes place.

If you are installing an optional Battery Backup (BBOX1), make certain that there is adequate room for its installation. Make certain that the Battery Backup is mounted close enough to the Power Supply that the interconnecting cable between the Battery Backup and the Power Supply can connect.
Do Not Connect the Battery Backup at this time!

> *Do Not Connect the Battery Backup at this time! Battery Backup should not be connected to the System power supply until all power up testing has been completed!*

Charging the Battery

The rechargeable batteries are automatically charged when the KSU is plugged in.
When System is in a full-load condition (eight CO Trunks and twenty-four Extensions all in use), the batteries provide a minimum of 1 hour's consecutive use. Change the batteries every two years.

Installing or Replacing Batteries

Caution

To Reduce the Risk of Fire or Injury to persons, Read and Follow these Instructions.

1. Use only the following type and size batteries:
   12 Volt 6.5 Amp/Hour "Gel-Cell" sealed batteries (2).
   Dimensions, approximately 3 1/4" (H), 5 15/16" (W), 2 1/2" (D).
   PowerSonic model PS660 or equivalent.
2. Do not dispose of the batteries in a fire. The cell may explode.
   Check with local codes for possible special disposal instructions.
3. Do not open or mutilate the batteries. Released electrolyte is corrosive and may cause damage to the eyes or skin. It may be toxic if swallowed.
4. Exercise care in handling batteries in order not to short the battery with conducting materials such as rings, bracelets, and keys. The battery or conductor may overheat and cause burns.

This product is defined as a secondary battery operated device. As such, the following instructions should also be read and followed:

1. Charge the batteries provided with or identified for use with this product only in accordance with the instructions and limitations specified in this manual.

2. Observe proper polarity orientation between the batteries and battery charger.

3. Do not mix old and new batteries in this product.

4. Do not mix batteries of different sizes or from different manufacturers in this product.

Before installing or replacing batteries, disconnect the battery supply unit to the KSU by removing the polarized battery connector at the KSU. Due to the weight of the batteries, it is advised that the battery cabinet be removed from the wall before working on it.

System Ground

It is strongly recommended that the system be grounded by connecting a heavy, insulated copper wire (e.g., 14AWG or larger) between the grounding bolt on the right-lower side of the cabinet and an earth ground.
Without this System Ground there is no protection against lightning damage to Co lines and warranty will be voided.

Do not connect the grounding wire of the KSU to a computer, telex, or any other external device.

KSU Connecting (Main) Panel Layout

The following illustration should be used as a reference when connecting equipment to the G1-824 KSU.
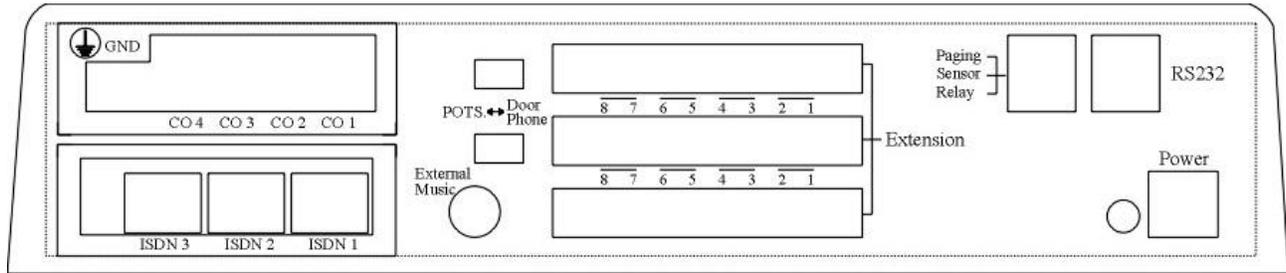
G1-824 KSU Main Panel

Refer to the wiring diagram located on the inside of the cable cover for all connections

Connecting Stations

The station cabling for the G1-824 should be a home run from the jack to the telephone room. The termination should be at conventional 66 type connecting blocks or Krone blocks or directly to the provided station connectors. One pair twisted wiring is required for each station location. Attention to proper cabling will go a long way towards a successful installation and minimizing service calls after installation. Some guidelines for running station cable are as follows:

●   Avoid running cable parallel to fluorescent light fixtures or electrical lines not in conduit. If these obstacles are unavoidable, run the cable at right angles across them.
●   Do not run station cable inside conduit already occupied by electrical wiring.
●   Do not run station cable near equipment with electric motors or strong magnetic fields.
●   Do not place station cable on the ground where it can be stepped on or rolled over by office furniture or office equipment.

Digital Key Telephone – DK1-21/22/31/33

● A cable cover is provided with the KSU. Station cables can enter from either the top or bottom as desired. Remove one or both ends of the cover as required and route the station cable through the hole. Terminate the station wires with the connectors that are provided. The stations will connect to the KSU as shown on the main panel (above) on connector locations 11 – 28.
● Connect Tip terminal with GRN terminal (screws) of the modular jack, Ring with RED.
● There is no polarity requirement on Tip and Ring.
● 2-conductor wiring is required for DK1 Digital Key Telephones.
● Open the overlay of the function key on DK1 telephone and select the 1st or 2nd station. Dip switch to the right for the 1st station. Dip switch to the left for the 2nd station.
● Take care that if you are paralleling 2 DK phones on a Digital Twin Port that neither of the DK phones contains a DK1-SLC card. The presence of thee DK1-SLC card will prevent the correct operation of the Digital Twin Port. Any DK phone containing a DK1-SLC must be connected to its own individual Digital Twin Port.
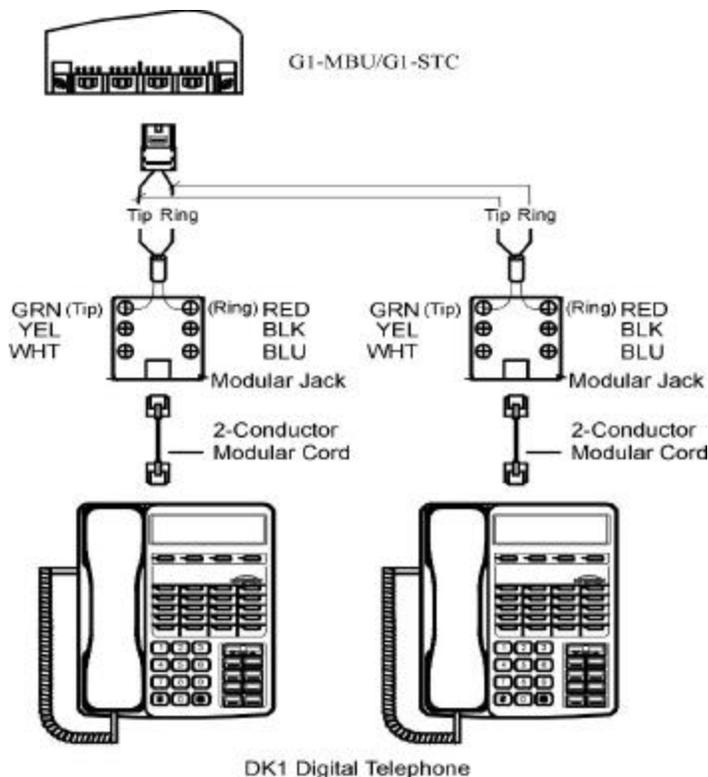
Dip to right: the 1st station.
Dip to left: the 2nd station.

CAUTION!: Avoid shorting Tip and Ring together. It may damage the G1-MBU or G1-STC board.

Digital Key Telephone – DK1-21H

● A cable cover is provided with the KSU. Station cables can enter from either the top or bottom as desired. Remove one or both ends of the cover as required and route the station cable through the hole. Terminate the station wires with the connectors that are provided. The stations will connect to the KSU as shown on the main panel (above) on connector locations 11 – 28.

● Connect Tip terminal with GRN terminal (screws) of the modular jack, Ring with RED.

● There is no polarity requirement on Tip and Ring.

● **4-conductor wiring** is required for DK1-21H Digital Key Telephones from the Handset to Wall socket.

● Open the overlay of the function key on DK1-21H telephone and select the 1st station.

● Connect the single line telephone from the phone box. Connect Tip terminal with YEL terminal (screws) of the modular jack, Ring with BLK..
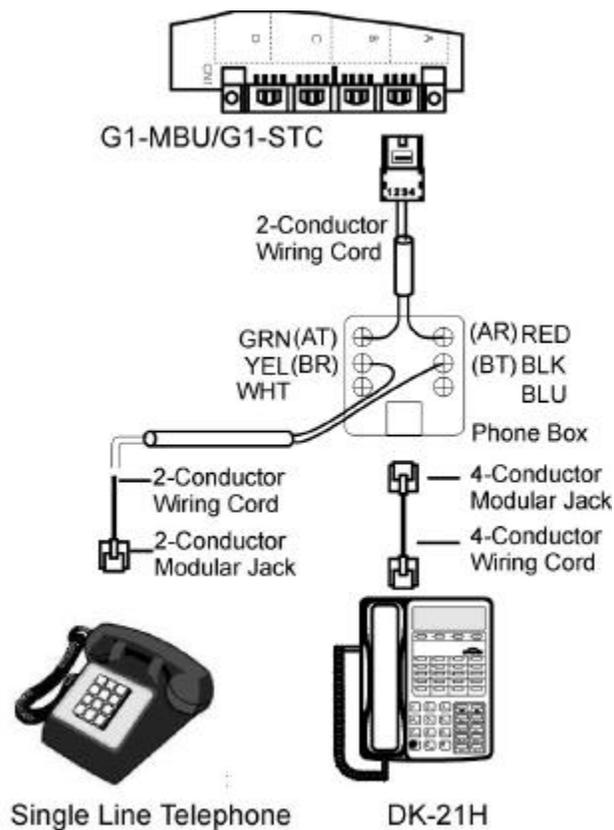
Dip to right on DK1-21H

CAUTION!

1. **Avoid shorting Tip and Ring together. It may damage the G1-MBU or G1-STC board.**

2. **System does not allow another Digital key phone to be connected on the same digital twin port as a DK1-21H.**

Access Control Telephone – ACP

- A cable cover is provided with the KSU. Station cables can enter from either the top or bottom as desired. Remove one or both ends of the cover as required and route the station cable through the hole. Terminate the station wires with the connectors that are provided. The stations will connect to the KSU as shown on the main panel (above) on connector locations 11 – 28.
- Connect Tip/Ring terminals from KSU(G1-MBU/G1-STC) to the ACP connector (6 contacts).
- There is no polarity requirement on Tip and Ring.
- Connect Relay for applications such as door open to the ACP connector (6 contacts).
- Connect Sensor for applications such as door open alarm to the ACP connector (6 contacts).
- Mount ACP connector on to ACP itself.
- Select the 1st or 2nd station. Jumper as shown in diagram below.
- Mount ACP on the wall.
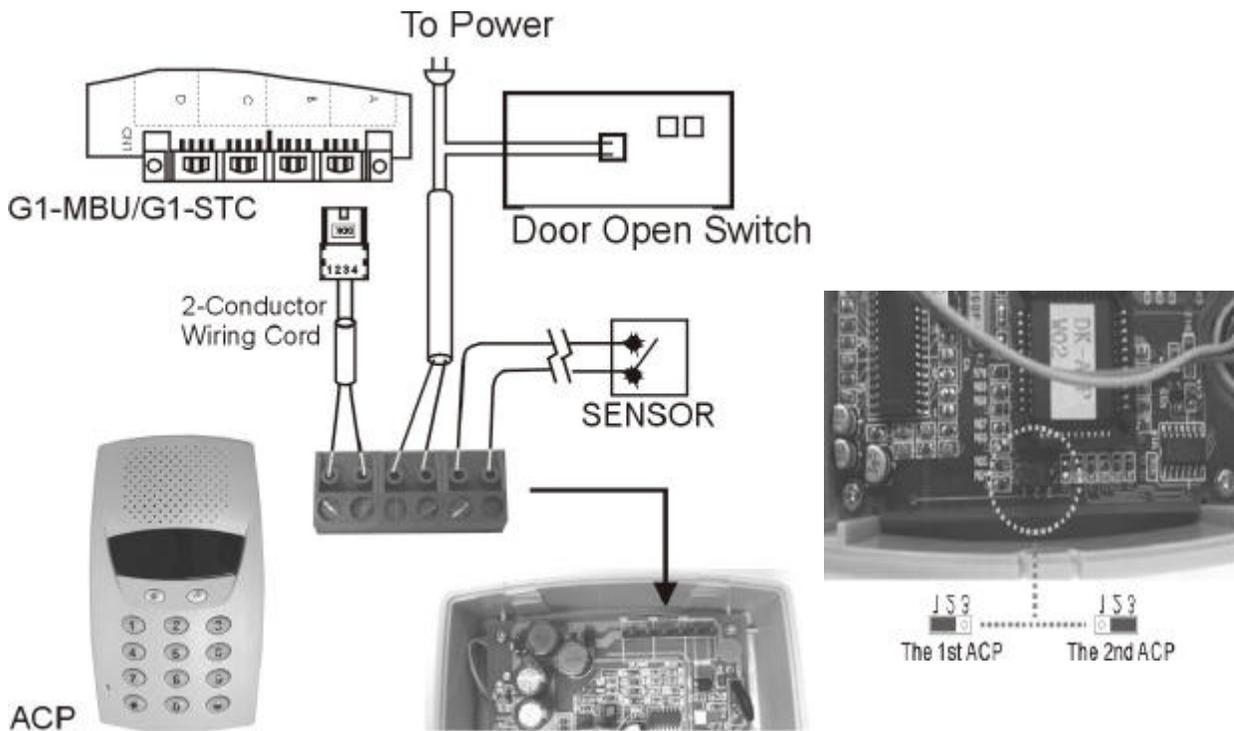
CAUTION!: Avoid shorting Tip and Ring together. It may damage the G1-MBU or G1-STC board.

Single Line Telephone (connected to G1-SLC)

● A cable cover is provided with the KSU. Station cables can enter from either the top or bottom as desired. Remove one or both ends of the cover as required and route the station cable through the hole. Terminate the station wires with the connectors that are provided. The stations will connect to the KSU as shown on the main panel (above) on connector locations 27 – 34 (Needs G1-SLC installed).
● Connect Tip terminal with GRN terminal (screws) of the modular jack, Ring with RED.
● There is no polarity requirement on Tip and Ring.
● 2-conductor wiring is required for Single Line Telephones.

Single Line Telephone
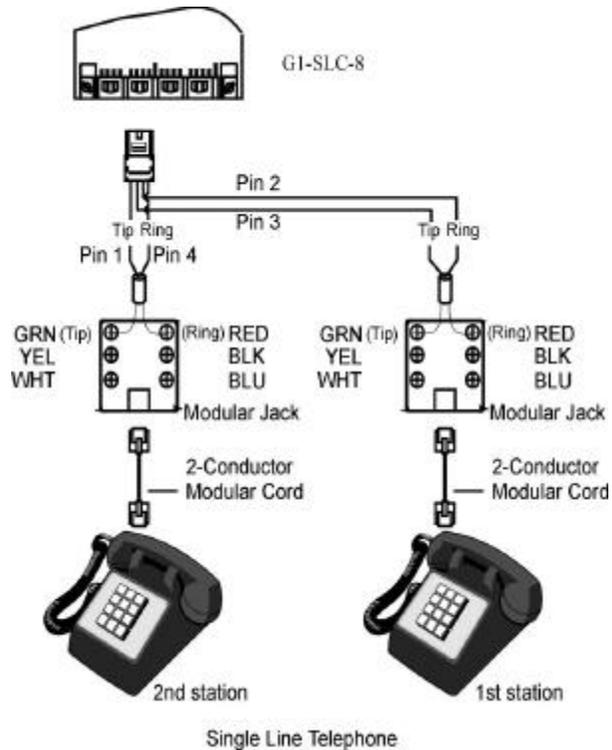
Door Phone Connection

● One Door phone may be connected to the G1-824 system.
● A cable cover is provided with the KSU. Door phone cable can enter from either the top or bottom as desired. Remove one or both ends of the cover as required and route the door phone cable through the hole. Terminate the door phone wires with the connectors that are provided. The Door phone will connect to the KSU as shown on the main panel (above) on connector locations 34 (Needs G1-SLC installed).
● Connect Tip terminal with GRN terminal (screws) of the modular jack, Ring with RED.
● No polarity on Tip and Ring.
● 2-conductor wiring is required for Door phone.
● Adjust the DIP selector on the main panel to Door Phone.

Door Phone Connection
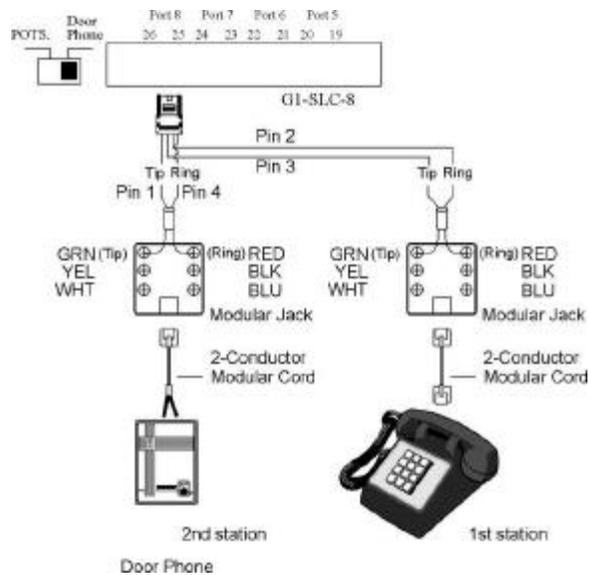
Single Line Telephone (connected to DK-SLD)

- A cable cover is provided with the KSU. Station cables can enter from either the top or bottom as desired. Remove one or both ends of the cover as required and route the station cable through the hole. Terminate the station wires with the connectors that are provided. The stations will connect to the KSU as shown on the main panel (above) on connector locations 11 – 28.
- Connect Tip terminal with GRN terminal (screws) of the modular jack, Ring with RED.
- There is no polarity requirement on Tip and Ring.
- 2-conductor wiring is required for DK-SLD Single Line Telephone Adapter.
- Distribute two cords for two single line telephones.
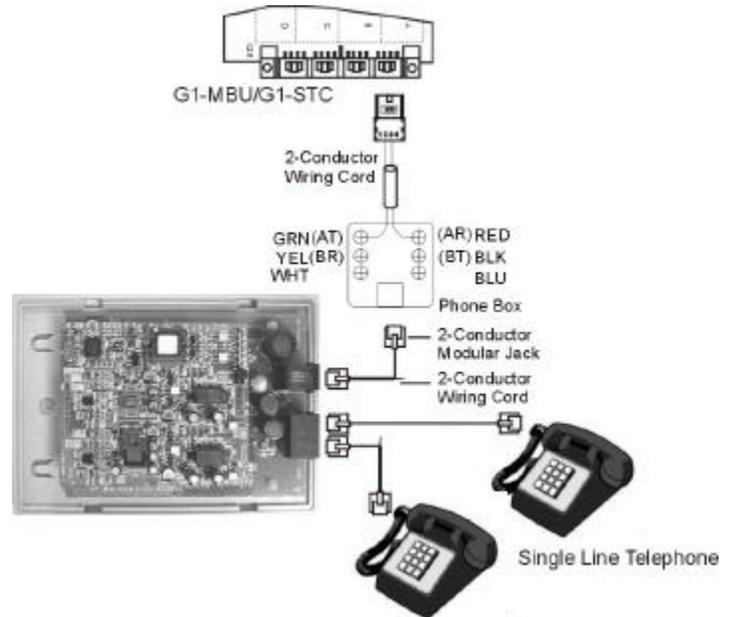
CO/PABX Connections

- Make your CO line connection to the telephone company on this connector. Pins 3 and 4 of the connector are for the CO line.
- RJ-11C (2 wire) modular connector is required.
- 2-conductor wiring is required.
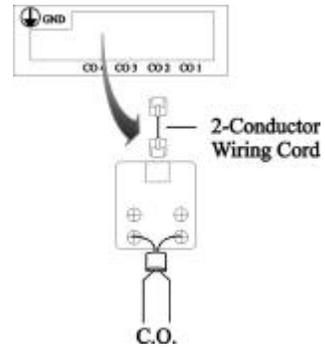
ISDN S/T Connections

- Make your CO line connection to the telephone company on this connector. Pins 3 to 6 of the connector are for the CO line.
- Cable: Twisted 2 pairs
- Connector Type: RJ-45 (4 wire) modular connector is required.
- Connector PIN assignment: (Pin 1, 2, 7, 8 are reserved.)
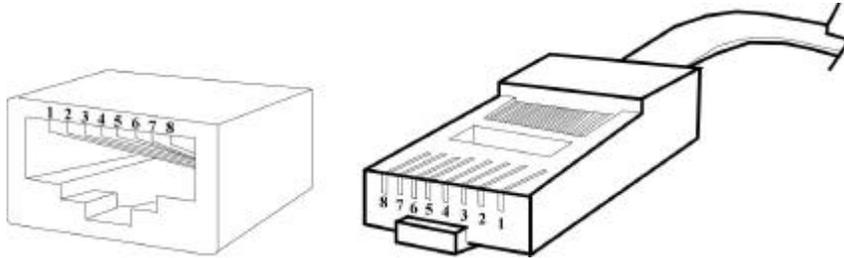
- Install/remove the terminators by adjusting the jumper JP1 (A, B, C) and JP2 (A, B, C) on SIU card. If there is no other ISDN device connected after the ISDN interface of SIU card when using point to multi-point connection, this ISDN interface port needs the terminator installed. Otherwise, remove the terminator.

  Example:
  The following is the point to multi-point connection.
  . The 1st ISDN interface needs the terminator because there is no other ISDN device connected after this ISDN interface of SIU card.
  . The 2nd ISDN interface does not need the terminator because there is an ISDN Modem connected after this ISDN interface of SIU card.
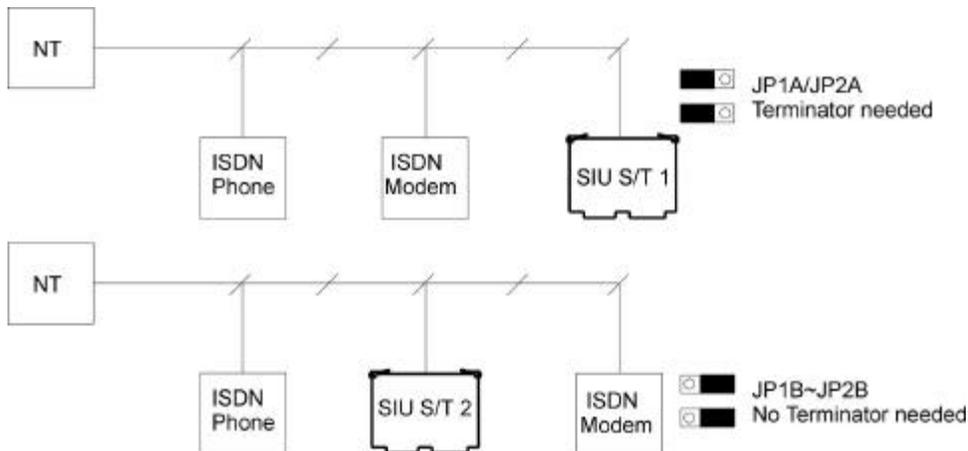
- Adjust 8K/256K jumper on SIU for the ISDN line. Adjust it to 8K position for most ISDN lines.

- T-Interface Connection:
  If the user has programmed the ISDN interface of SIU to a T-Interface, the wiring should be as follows:
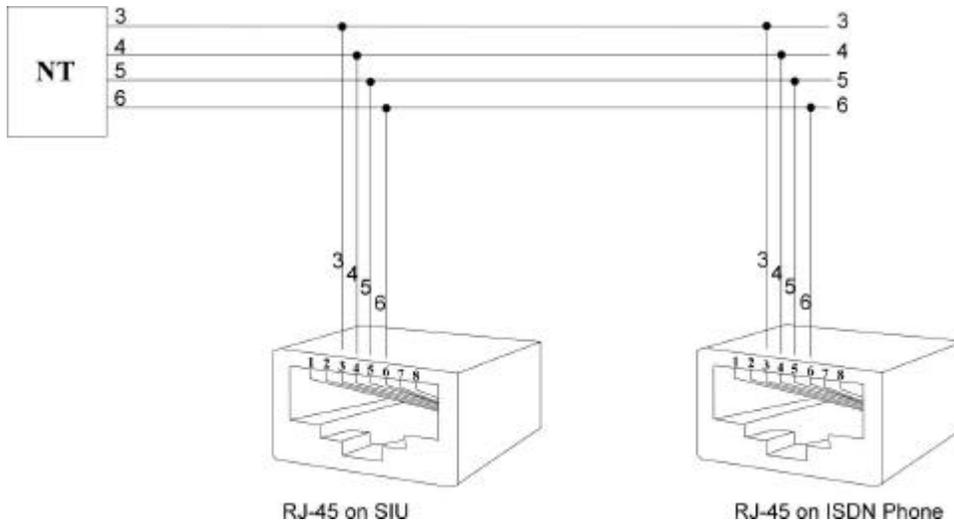
- S-Interface Connection:
  If the user has programmed the ISDN interface of SIU to a S-Interface, the wiring should be as the following:
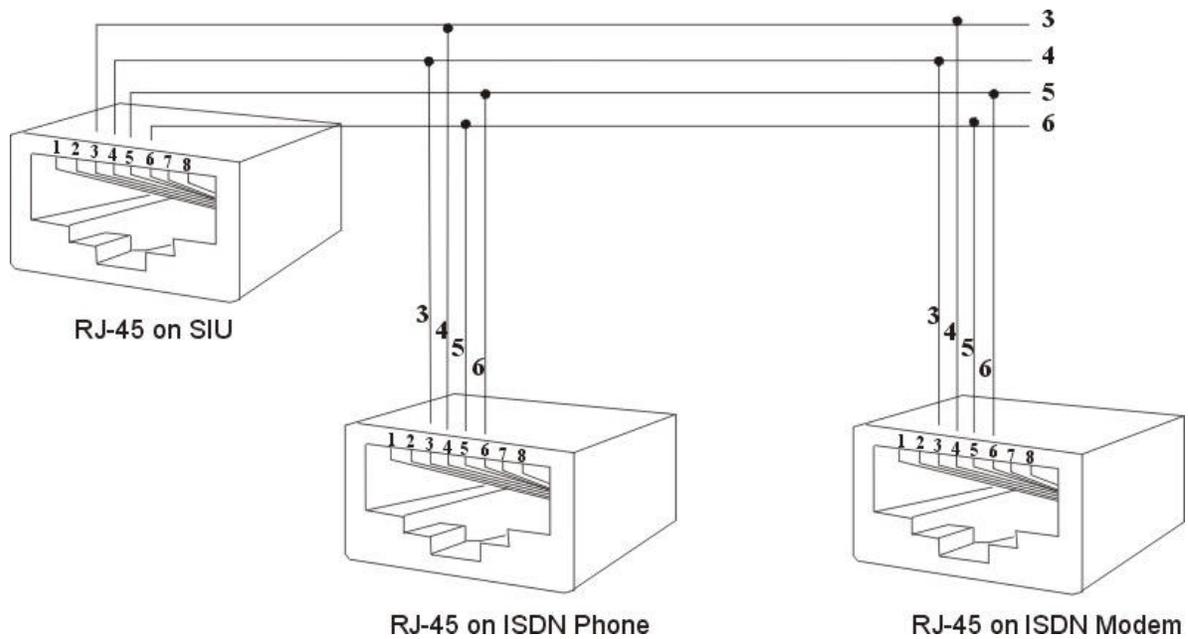
● Bus Configurations on the S/T Interface:
  Point to Point:
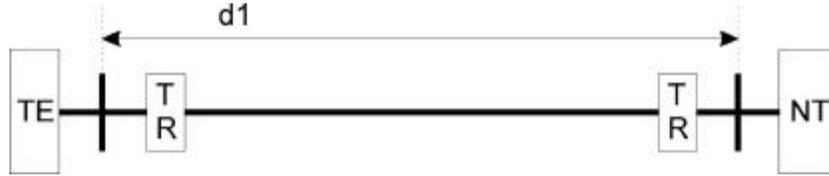
d1: 750m ~ 1000m; Length limitation by attenuation of 6dB at 96kHz.

Short Passive Bus:
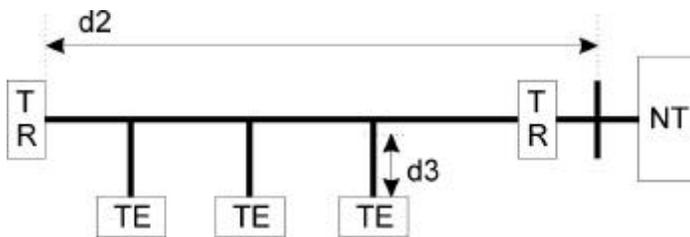
d2: 100m ~ 200m; Length limitation by round trip delay 10us to 14us, not by attenuation.
d3: Recommendation with a cord having a minimum length of 5m and not more than 10m.(5m   d3
       10m)

Extended Passive Bus:
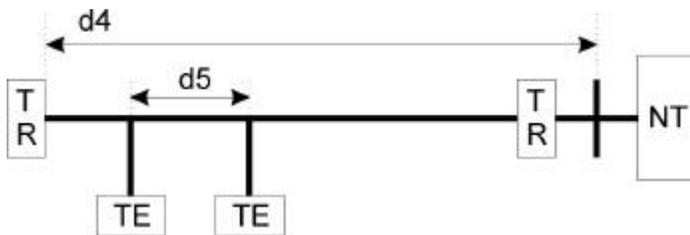
d4: 500m ~ 800m; Length limitation by round trip delay 10us to 14us, not by attenuation.
d5: 25m ~ 50m; Length limitation between TE's by differential round trip delay of 2us.

Optional Cabling

Connect a 6 conductor mounting cord from the KSU to a RJ-25 modular block.

Door Switch (Relay) Connection

- One Door Switch (24+-12VDC) may be used on the G1-824 system.
- 2-conductor wiring is required.
- Connect the door switch to pins 1 and 6 of the RJ-11 connector.

Sensor Connection

- The Sensor connector on G1-824 may be used for the External Sensor input.
- The sensor may be configured for normally open or normally closed operation.
- 2-conductor wiring is required.
- Connect the sensor to pins 2 and 5 of the RJ-11 connector.
- Refer to System Programming Form 39 -- Sensor Assignment.

Paging Connection

- The Paging connector on G1-824 may be used for an External Paging input.
- 2-conductor wiring is required.
- Connect the amplifier to pins 3 and 4 of the RJ-11 connector.

Door switch/Sensor/Paging cabling
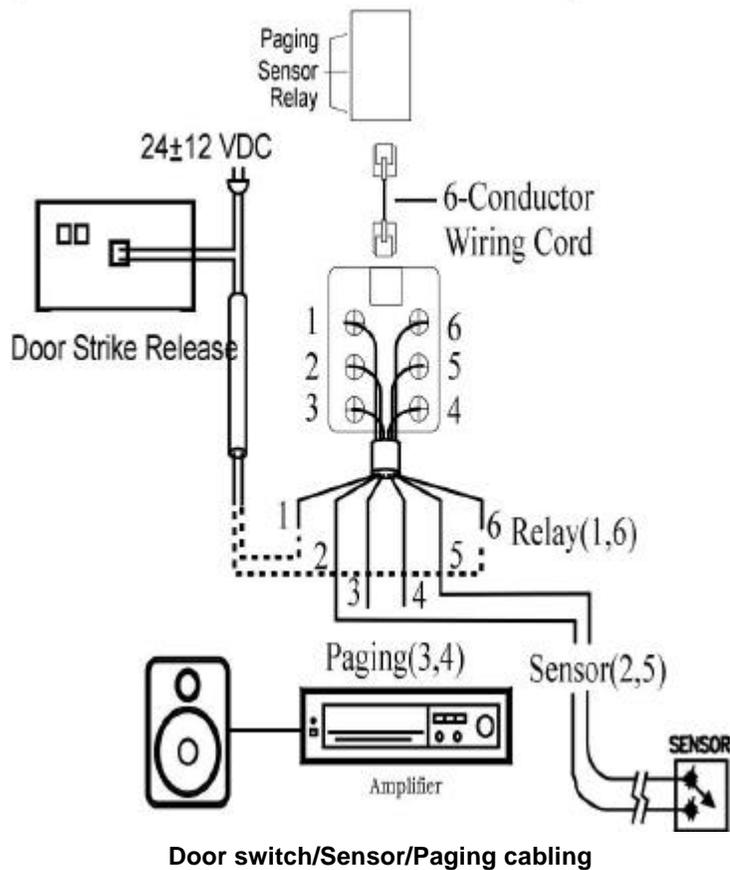
Refer to Illustration Door Switch / Sensor / Paging cabling:

Music on Hold Connection

- Connect the (optional) external music source to the external Music" input labelled on the KSU.
- Use a 1/8" mini plug to connect the music source to the KSU via an approved line isolation unit.

RS232 Port Connection

Use the RJ-11 connector to terminate the RS232 cable. Then connect the RJ-11 to the KSU with a 6 conductor line cord. Insert the line cord into the connector labelled RS-232.

Notice: Don't connect the RS232 cable over the length limitation (15M / 50 feet.)

RS232

6-Conductor Wiring Cord

(BLU) DTR 1 6 (WHT)
(BLK) SG 2 5 DSR (YEL)
(RED) RxD 3 4 TxD (GRN)

To Computer or Printer

RS232

6-Conductor Wiring Cord

To Computer or Printer

G1-824

DTE				PC RS232 Serial Printer	DTE
TD	4		3	TD	
RD	3		2	RD	
			7	RTS	
			8	CTS	
			1	CD	
DTR	1		4	DTR	
DSR	5		6	DSR	
			9	RI	
GND	2		5	GND	

RJ-11   DB9

G1-824

DTE				PC RS232 Serial Printer	DTE
TD	4		2	TD	
RD	3		3	RD	
			4	RTS	
			5	CTS	
			8	DCD	
DTR	1		20	DTR	
DSR	5		6	DSR	
			22	CI	
GND	2		7	GND	
			1	FG	
			15		
			17		
			24		
			18		
			21		
			23		
			25		

RJ-11   DB25

To AC Mains

Power On and Operational Test

Before connecting the G1-PWU to AC power:
● Verify that input voltage and input voltage selection jumper on G1-PWU are correct before you power up the system.
● Recheck the cabling for incorrect connections, loose wires and wiring fragments that may cause short-circuits.
● Plug the power cord into a power outlet.
● Verify the system boots properly by checking the display of a telephone set.
● You may now connect the battery back up unit if applicable.

Operational Tests

Check each telephone and CO line to verify that outgoing lines are connected properly.
Check that intercom calls can be made from extension to extension.

WARNING:
DISCONNECT THE POWER SUPPLY FROM THE AC POWER SOURCE BEFORE WIRING OR CHANGING ANY WIRING.

**Connect the Battery Backup *AFTER* AC power has been connected to the Power Supply.
Disconnect Battery Backup *BEFORE* disconnecting AC power from the Power Supply.**

NOTICE:
**ONCE THE SYSTEM OPERATES PROPERLY, PROCEED TO SYSTEM PROGRAMMING.
(REFER TO THE <u>SYSTEM PROGRAMMING MANUAL</u>.)**

Special Immunity Protection for System and terminals

Adding **Noise Filters** to the points below can enhance the immunity capability of the system from outside environmental noise.

For Power Supply:
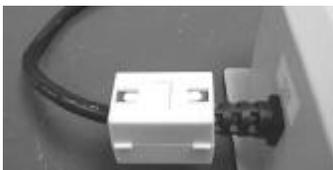
For Line:

GENERAL DESCRIPTION

G2-1648

Description - G2-1648

The G2-1648 is an advanced ISDN Digital hybrid telephone system employing a microprocessor stored program and digitally controlled solid state Time-division switching. The G2-1648 system is specifically designed for small business as well as residential applications. At the forefront of the system design is a universal concept to adapting and connecting with a variety of communications devices. Productive **HYBREX** Digital Key Telephones offer thoughtfully designed productive feature access to keep you connected with one another and customers. Auto Telecom technology leads the industry in providing for compatibility with devices such as fax machines, answering machines, cordless phones, computer modems and other office/home equipment.
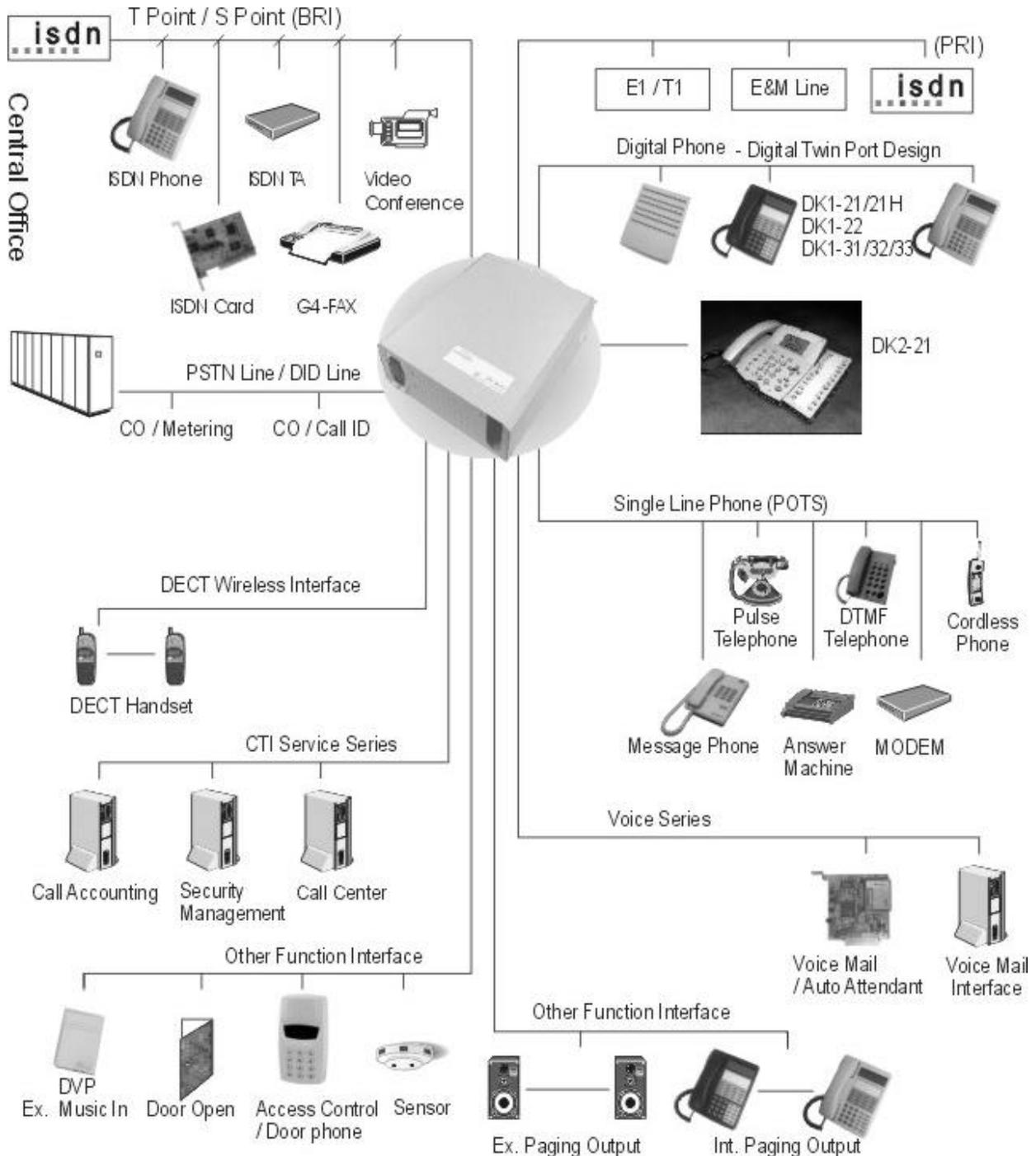
Mechanical Specifications (Key Service Unit)

CABINET DIMENSIONS		
XXXmm W	XXmm D	XXXmm H
XXX"	"	
WEIGHT	XX Kg (Configuration: 4 x 8)	
	XX lbs	

Mechanical Specifications (Battery Back Up Housing)

CABINET DIMENSIONS		
15.5" W	3.0" D	5.75" H
WEIGHT	With Batteries -16 lbs Without Batteries- 4 lbs.	
Mounting Screws	12.25" center to center	

Environmental Specifications

	OPERATING CONDITIONS	STORAGE CONDITIONS
Temperature	0º to 45º C (32º to 113º F)	-40º to 66º C (-40º to 150º F)
Humidity	10 to 95% relative Non-condensing	10 to 95% relative non-condensing

Parts & Peripherals

System Modules

Model	Description
G2-MMD	KSU with Power Modular
G2-MPU	G2 128/144/300/600 Main CPU Controller
G2-IPU	G2-1648 Main CPU Controller / G2 128/144/300/600 Interface Control Card.
G2-MSU	Multi-Service Card (External Paging/ Relay/ Sensor / RS232/ MODEM Interface/ Door Phone / External MOH Interface)
G2-TKU	Trunk Card : 4 CO lines
G2-PIU	ISDN PRI Interface: 24 Channels Maximum
G2-SIU-2	ISDN S/T interface with 2 circuits
G2-SIU-3	ISDN S/T interface with 3 circuits
G2-STU	Station Card : 4 Digital Twin-ports
G2-SLU	Single Line Card : 8 SLT ports
G2-PWU	G2 Power Supply

Type of Phones

Model	Description
DK1-21H	Multifunction Key Telephone. Includes 32 character LCD display, single line telephone port, speakerphone, handsfree, headset jack, 20 dual color keys and 14 function keys for feature access, DSS, CO Lines and speed dial.
DK1-21	Multifunction Key Telephone. Includes 32 character LCD display, speakerphone, handsfree, headset jack, 20 dual color keys and 14 function keys for feature access, DSS, CO Lines and speed dial.
DK1-22	Multifunction Key Telephone. Includes speakerphone, handsfree, headset jack, 20 dual color keys and 14 function keys for feature access, DSS, CO Lines and speed dial.
DK1-31	Multifunction Key Telephone. Includes 32 character LCD display, speakerphone, headset jack, 20 dual color keys and 14 function keys for feature access, DSS, CO Lines and speed dial.
DK1-32	Multifunction Key Telephone. Includes speakerphone, headset jack, 20 dual

	color keys and 14 function keys for feature access, DSS, CO Lines and speed dial.
DK1-33	Multifunction Key Telephone. Includes speakerphone, headset jack, 8 dual color keys and 14 function keys for feature access, DSS, CO Lines and speed dial.
DK1-SLC	DK1 Keyphone - SLT port for DK1-2x series
DK-SLD	Two Port SLT device – Convert a Digital port to two POTS ports
ACP	Access Control Phone
ACP/RF	Access Control Phone with RF Proximity Card function
PX-Card	RF Proximity Card for ACP/RF
WMU-12	Wall Mount Kit for DK1 Series Telephones

Peripheral Devices

Model	Description
DPU05	Door Phone - 2 Wires
BBOX0	Battery Box without Batteries
BBOX1	Battery Box with Batteries

Optional Interface Cards

Model	Description
G2-VMU	Voice Mail Unit (4 Channels) / Auto Attendant / Wake-up / Message Waiting
G2-LMU	LAN Management Unit
G2-CIC-D	Caller ID Card for G2-TKU – Dual Mode (FSK/DTMF)
G2-CIC-F	Caller ID Card for G2-TKU – FSK Mode
G1-MDC	4 Channel Metering Card for G2-TKU

System Installation - Introduction

This section provides directions for installing the system and optional equipment.
The installation must be performed by qualified service personnel.

Main components of the system are:

Key Service Unit, which includes:
- Power Supply Unit (G2-PWU)
- Main KSU (G2-MMU)
- CPU Unit (G2-IPU)
- Multi-Service Unit (G2-MSU)
- Trunk Unit (G2-TKU / G2-SIU / G2-PIU)
- Digital Station Unit (G2-STU)

Optional Expansion Cards:
- Trunk Card (G2-TKU / G2-SIU / G2-PIU)
- Digital Station Card (G2-STU – four digital twin port circuits)
- Single Line Station Card (G2-SLU – eight single line port circuits)
- G2-CIC Card (Caller ID Card - four port circuits)
- Voice Mail Unit (G2-VMU)
- LAN Management Unit (G2-LMU)
- Metering Card (G1-MDC)

NOTE: Please follow the directions step by step. The GDS-600 system should be installed in strict accordance with this manual.

Installation

Caution
1. **This system should be installed by qualified service personnel.**
4. **Do not install the Power Supply unless you have read the following instructions and completed all the installation and wiring.**
5. **STATIC SENSITIVE DEVICES! Please handle with care.**

Installing the Equipment

Backboard

Be sure to plan and allow enough space to mount and connect the key service unit, power supply and system battery back up if applicable.

Key Service Unit

Use the enclosed Hanging Template to locate the mounting position for the Key Service Unit. Drill appropriately spaced holes to fix the Hanging Template and mount the KSU on the wall. When mounting the KSU, make certain that there is adequate room for the future system expansion and that the connecting power cable between the power mains and the KSU. The same applies for the battery back up unit.

Power Supply

Dedicated Power Source - The power supply must be connected to a dedicated AC outlet.
Be sure that the third wire earth ground of the AC circuit is connected to a good electrical ground. If a music source is installed, it must be connected to a separate AC circuit rather than the system's dedicated AC line cord.

Check Your Voltage Selection Jumper
Verify that the input voltage and input voltage jumper are correct before you power on the system. The input voltage is set according to the Customer's requirement before shipping. However it is important to verify that the setting is correct prior to initial system power up.

Power Supply voltage options for the unit:
100-VAC: 100 to 120 V AC (50/60Hz) or 240-VAC: 205 to 265 V AC (50/60Hz).

Installing expansion and optional cards

In this step you will be installing printed circuit cards on to slots of the main board in the basic cabinet. Take your time and extra care to assure the printed circuit cards are properly aligned. After installing each option and expansion card, perform a visual inspection to assure the printed circuit card is installed properly.

4. Remove the 4 screws located at the corners of the cabinet and lift the front cover off.
5. Install the specific cards into the dedicated slots of G2-MBU as below card introduction.

Card Introduction
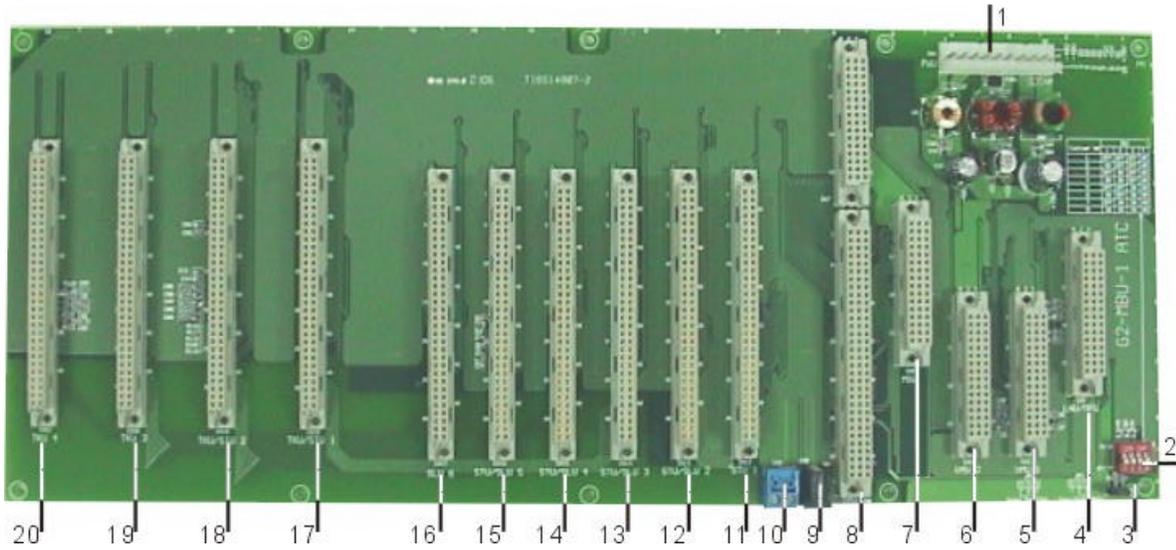
1.) CN1: Power socket to connect to the main power unit (G2-PWU)
2.) JP1: Reset jumper for flash memory
3.) SW1: Cabinet position selection
4.) CN2: LNU/MPU slot
5.) CN3: VMU 1 slot
6.) CN4: VMU 2 slot
7.) CN5: MSU slot
8.) CN6: IPU slot: G2-IPU slot
9.) CN8: DC power output
10.) CN9: Cabinet grounding for expansion
11.) CN12: STU 1 slot
12.) CN13: STU/SLU 2 slot
13.) CN14: STU/SLU 3 slot
14.) CN15: STU/SLU 4 slot
15.) CN16: STU/SLU 5 slot
16.) CN17: SLU slot 6
17.) CN18: TKU/SIU/PIU 1 slot
18.) CN19: TKU/SIU 2 slot
19.) CN20: TKU/SIU 3 slot
20.) CN21: TKU/SIU 4 slot

Installing CPU and option cards (continued)

G2-IPU
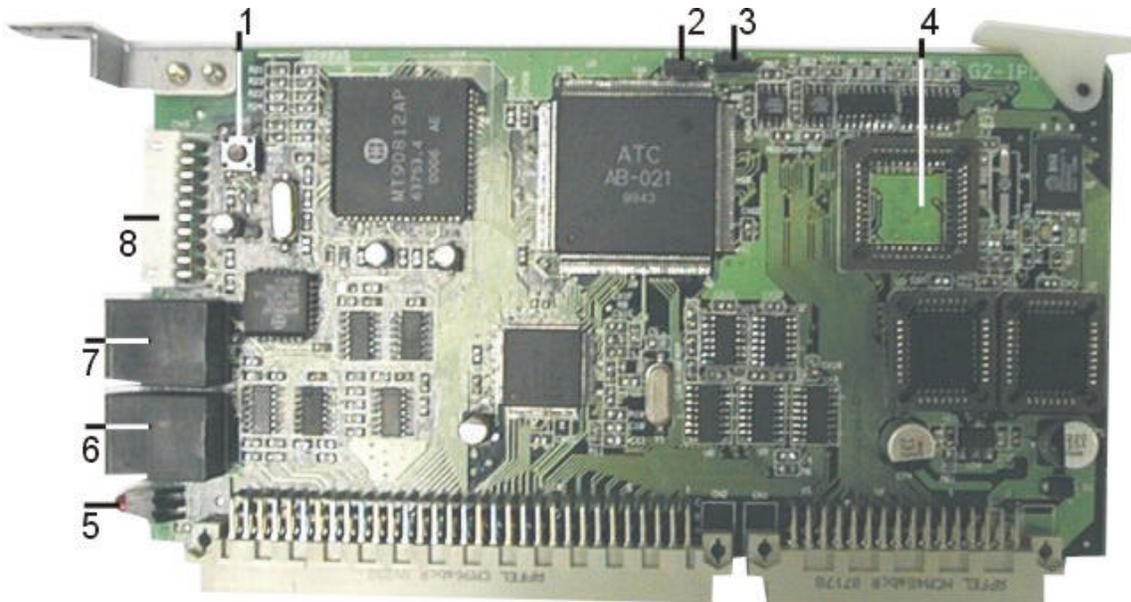
1.) SW1: Reset button
2.) JP1: Terminators for bus expansion of multi-cabinet.
3.) JP2: Terminators for bus expansion of multi-cabinet.

4.) Socket for the HDLC controller for bus expansion of multi-cabinet.
5.) LED1: Heart beat LED
6.) CN6: connector for expanding cabinet
7.) CN5: connector for expanding cabinet
8.) CN9: LCD connector
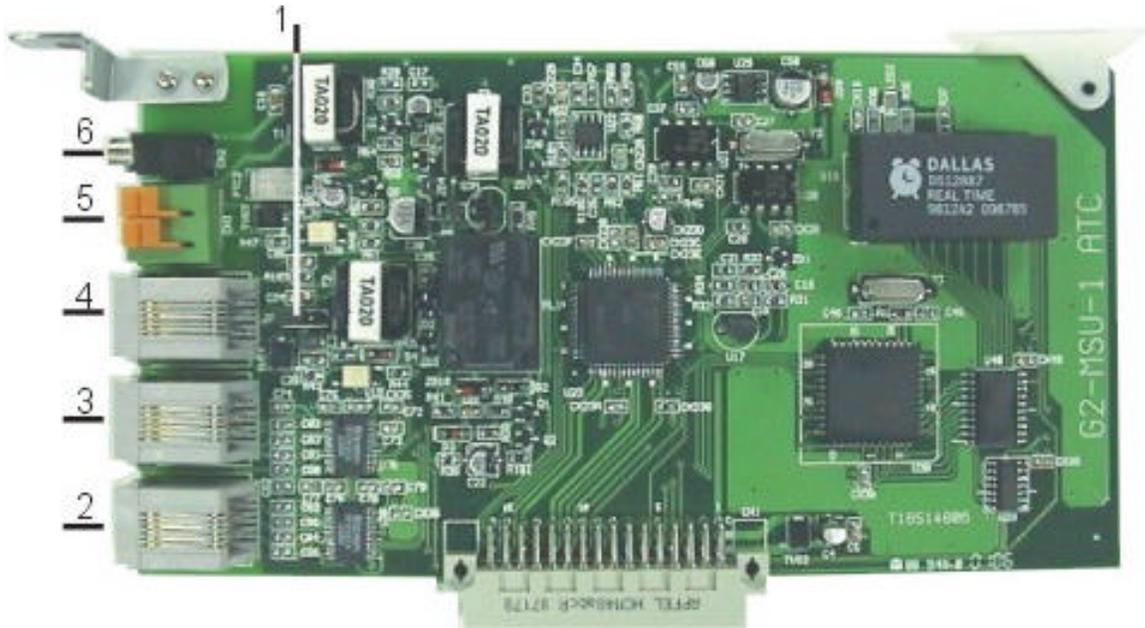
1.) JP1: Grounding Jumper for some specific external paging device
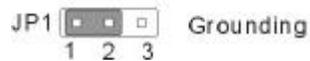
2.) MODEM connector for the external MODEM connection to the system
3.) RS232 connector
4.) Relay / Sensor / External Paging connector
5.) CN3: Door Phone Interface (for DPU05)
6.) CN2: External Music on Hold Interface

G2-VSC- Voice Service Card
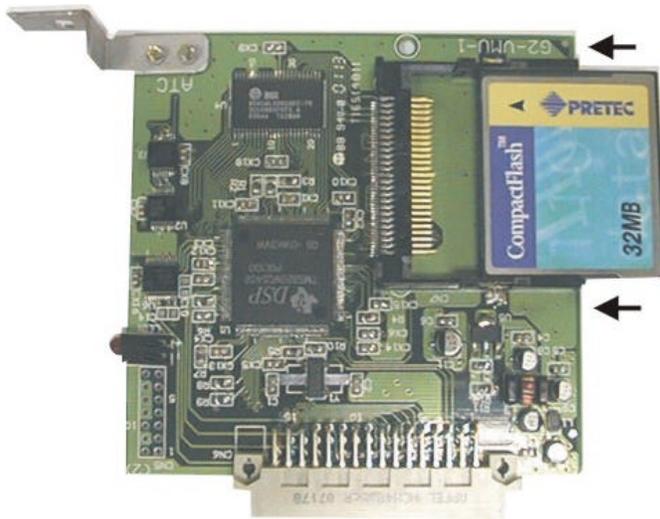
G2-STU Digital Station Card

● Install this G2-STU card on STU1, STU/SLU2, …, STU/SLU5 slot of the G2-MBU.
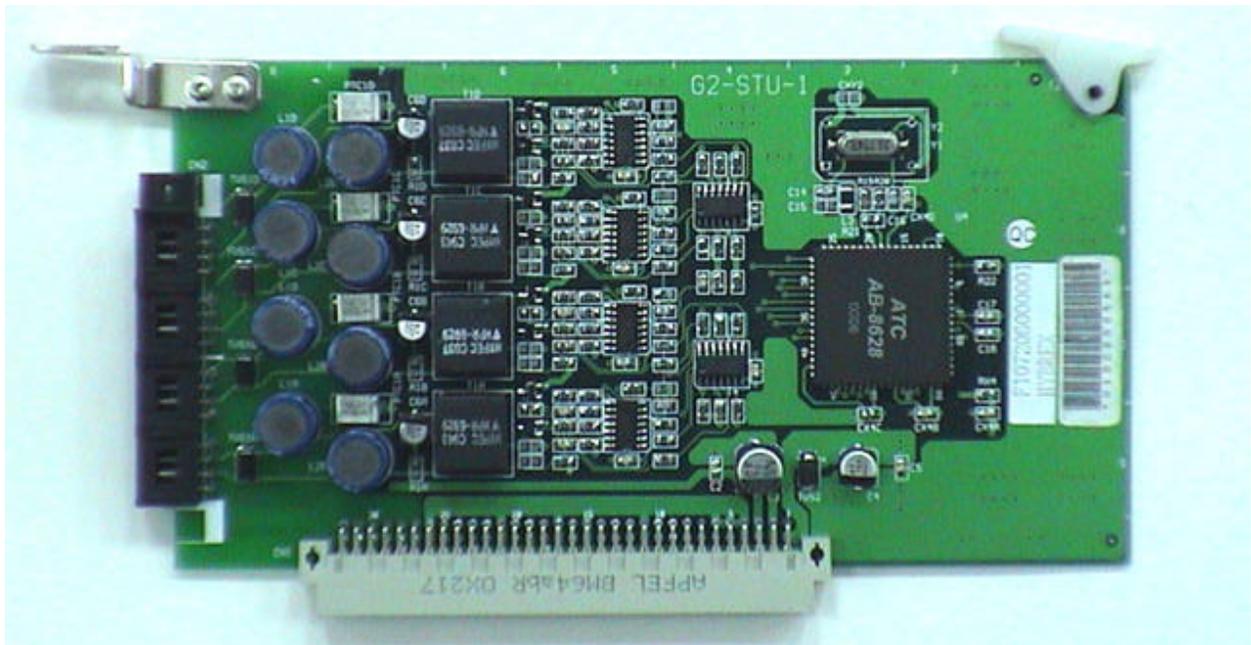
G2-SLU Analog Station Card

● Install this G2-SLU card on STU/SLU2, …, STU/SLU5, SLU6 slot of the G2-MBU.
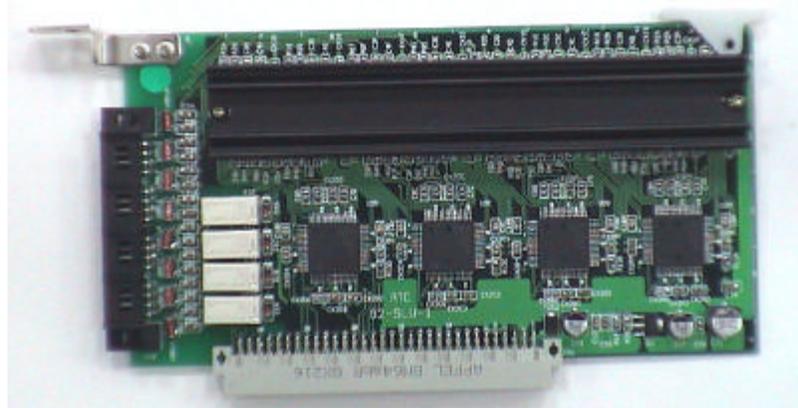
G2-TKU- 4 Port CO Line Card

● Install G1-CIC card or G1-MDC card on G2-TKU (optional).
● Install this G2-TKU card on TKU1/TKU2/TKU3/TKU4 slot of the G2-MBU.
● Connect an attached cable between CN4 of G2-TKU to CN3 of G2-SLU for power failure transfer.
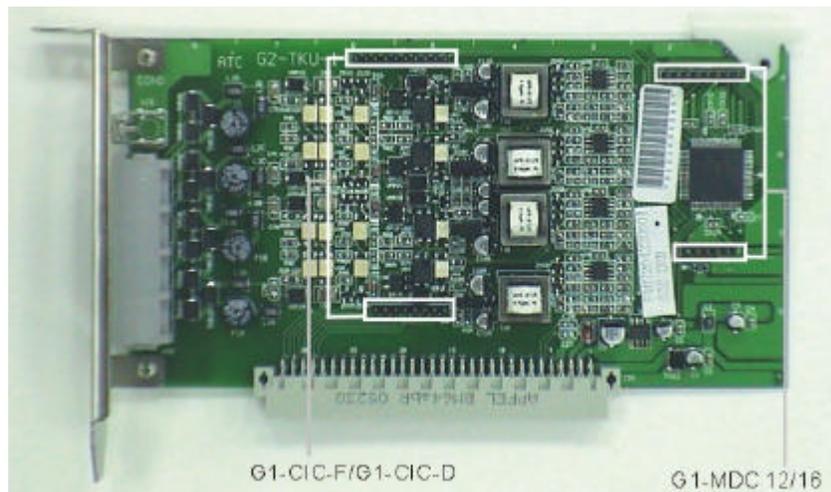
CN6/CN7: G1-CIC-D/G1-CIC-F
CN2/CN3: G1-MDC 12/16

G2-CIC- Caller ID Card

● Adjust JP1 of G1-CIC card for G2 use. And then install G1-CIC card on CN6/CN7 of G2-TKU card. Miss alignment could damage both cards or the system.

●   Install this G2-SIU card on TKU1/SIU1 or TKU2/SIU2 slot of the G2-MBU.
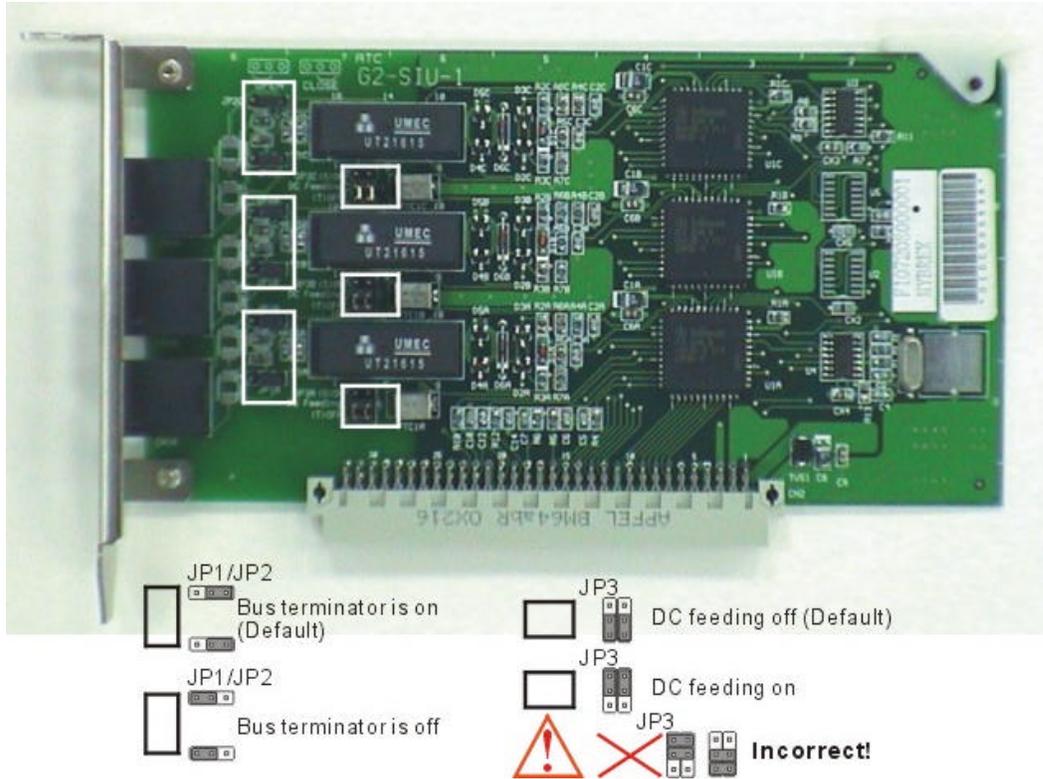
JP3(A,B,C): DC feeding jumper. Default is no DC output. If the internal ISDN device does not offer local power and need DC feeding to work. The related jumper of this internal ISDN interface needs to be set to "on".

Caution:
1.   When this jumper is on, users cannot loop "S" interface back to another "T" interface for testing purpose. Otherwise, it will damage this card!
2.   Incorrect jumper set will also damage this card.

JP1(A,B,C)/JP2(A,B,C): Bus Terminator.
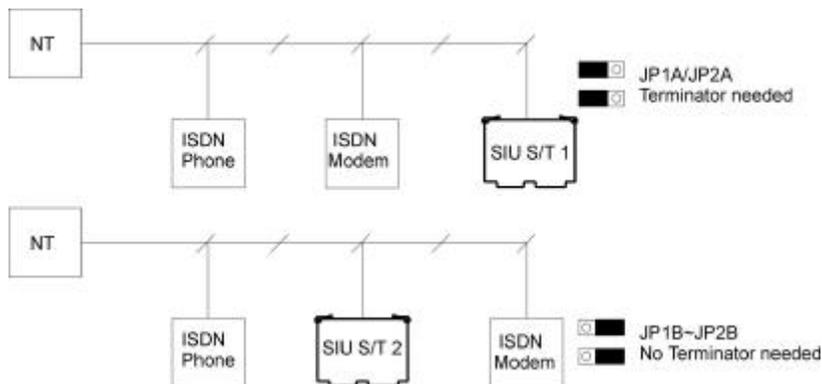
G2-PIU ISDN PRI / T1 / E1 Interface Card

● Install this G2-PIU card on TKU1/SIU1 slot of the G2-MBU.
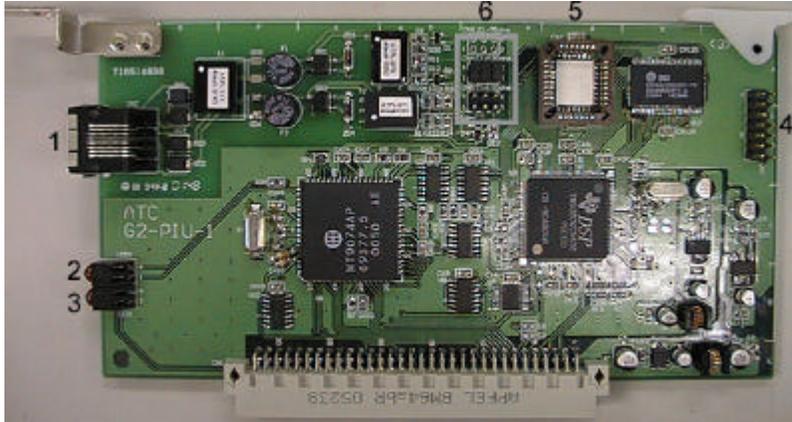
1. RJ 45 Connector:
   Pin 1,2: for TX.
   Pin 4,5: for RX.

2. LED 2: For Sync with network.
   1. Off: No connection.
   2. Flash: There are some troubles to sync.
   3. On: Sync OK.

3. LED 1: For the heart bead of DSP chip.
4. CN7: For test purpose.
5. DSP chip for T1/E1 interface.
6. CN4/CN5:
   Jumpers on CN4 is for E1 interface and ISDN PRI/E1 interface.
   Jumpers on CN5 is for T1 interface and ISDN PRI/T1 interface.

Voltage Selection Check

● Make a check to assure the power supply jumper setting is for the proper voltage.
● When complete, place the power supply cover back on the power supply.
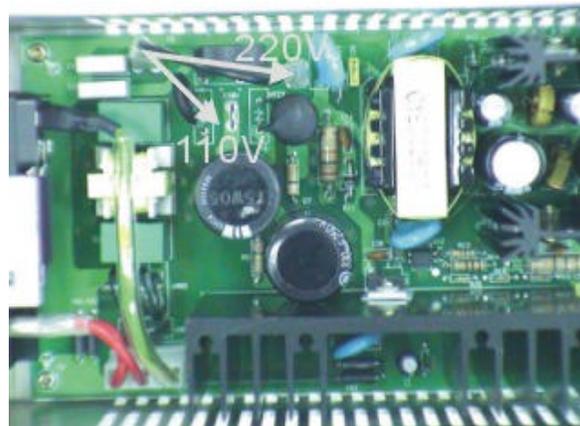
Replace Cover
With the expansion and option cards installed and the battery insulator removed, replace the cover and install the 4 screws removed earlier.

This concludes the installation of expansion and option cards!

Preparing The External Battery Backup

The Key Service Unit has two external backup batteries in series (12 volts each) for emergency power when a power failure takes place. The G2-1648 requires 2 x BB0X1 units for battery backup.

If you are installing the optional Battery Backup (BBOX1 x 2), make certain that there is adequate room for their installation. Make certain that the Battery Backup is mounted close enough to the Power Supply that the interconnecting cables between the Battery Backups and the Power Supply can connect.
Do Not Connect the Battery Backup at this time!

> ***Do Not Connect the Battery Backup at this time! Battery Backup should not be connected to the System power supply until all power up testing has been completed!***

Charging the Battery
The rechargeable batteries are automatically charged when the KSU is plugged in.
When System is in a full-load condition (eight CO Trunks and twenty-four Extensions all in use), the batteries provide a minimum of 1 hour's consecutive use. Change the batteries every two years.

Installing or Replacing Batteries

Caution

To Reduce the Risk of Fire or Injury to persons, Read and Follow these Instructions.

1. Use only the following type and size batteries:
    12 Volt 6.5 Amp/Hour "Gel-Cell" sealed batteries (2).
    Dimensions, approximately 3 1/4" (H), 5 15/16" (W), 2 1/2" (D).
    PowerSonic model PS660 or equivalent.
  2. Do not dispose of the batteries in a fire. The cell may explode.
    Check with local codes for possible special disposal instructions.
5. Do not open or mutilate the batteries. Released electrolyte is corrosive and may cause damage to the eyes or skin. It may be toxic if swallowed.
6. Exercise care in handling batteries in order not to short the battery with conducting materials such as rings, bracelets, and keys. The battery or conductor may overheat and cause burns.

This product is defined as a secondary battery operated device. As such, the following instructions should also be read and followed:

1. Charge the batteries provided with or identified for use with this product only in accordance with the

instructions and limitations specified in this manual.

2. Observe proper polarity orientation between the batteries and battery charger.

3. Do not mix old and new batteries in this product.

4. Do not mix batteries of different sizes or from different manufacturers in this product.

Before installing or replacing batteries, disconnect the battery supply unit to the KSU by removing the polarized battery connector at the KSU. Due to the weight of the batteries, it is advised that the battery cabinet be removed from the wall before working on it.

System Ground

It is strongly recommended that the system be grounded by connecting a heavy, insulated copper wire (e.g., 14AWG or larger) between the grounding bolt on the right-lower side of the cabinet and an earth ground. Without this System Ground there is no protection against lightning damage to Co lines and warranty will be voided.
Do not connect the grounding wire of the KSU to a computer, telex, or any other external device.

To Earth Ground

Refer to the wiring diagram located on the inside of the cable cover for all connections

Connecting Stations

The station cabling for the G2-1648 should be a home run from the jack to the telephone room. The termination should be at conventional 66 type connecting blocks or Krone or directly to the provided station connectors. One pair twisted wiring is required for each station location. Attention to proper cabling will go a long way towards a successful installation and minimizing service calls after installation. Some guidelines for running station cable are as follows:

● Avoid running cable parallel to fluorescent light fixtures or electrical lines not in conduit. If these obstacles are unavoidable, run the cable at right angles across them.
● Do not run station cable inside conduit already occupied by electrical wiring.
● Do not run station cable near equipment with electric motors or strong magnetic fields.
● Do not place station cable on the ground where it can be stepped on or rolled over by office furniture or office equipment.

To AC Mains

Power On and Operational Test

Before connecting the G2-PWU to AC power:
● Verify that input voltage and input voltage selection jumper on G2-PWU are correct before you power up the system.
● Recheck the cabling for incorrect connections, loose wires and wiring fragments that may cause short-circuits.
● Plug the power cord into a power outlet.
● Verify the system boots properly by checking the display of a telephone set.
● You may now connect the battery back up unit if applicable.

Operational Tests

Check each telephone and CO line to verify that outgoing lines are connected properly.
Check that intercom calls can be made from extension to extension.

WARNING:
DISCONNECT THE POWER SUPPLY FROM THE AC POWER SOURCE BEFORE WIRING OR CHANGING ANY WIRING.

**Connect the Battery Backup *AFTER* AC power has been connected to the Power Supply.
Disconnect Battery Backup *BEFORE* disconnecting AC power from the Power Supply.**

NOTICE:
**ONCE THE SYSTEM OPERATES PROPERLY, PROCEED TO SYSTEM PROGRAMMING.
(REFER TO THE SYSTEM PROGRAMMING MANUAL.)**

Special Immunity Protection for System and terminals

Add **Noise Filter** for below points can enhance the immunity capability of system from outside environment noise.

For Power Supply:
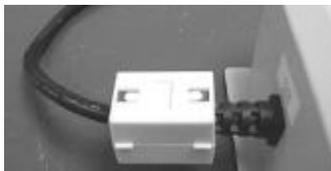
For Line:

# PROGRAMMING INFORMATION

Programming Information

This document contains the system forms required to program the G1-824 and an explanation of the parameters.

New Systems

We recommend that all new systems have the system memory reset before system programming takes place. This ensures that any extraneous information that may be present in system memory is erased and that the system database will not be corrupt.

To Reset System Memory.

Enter System Programming :
From an LCD equipped HYBREX DK1-21(H)/DK1-31 Digital Telephone Set:

1.   Press [PRG]. Press [7].
2.   Enter Password if programmed. (New systems will not have a system password).
3.   Press [SAVE].
4.   LCD display will show:

```
┌─────────────────────────────┐
│      PROGRAM MODE: __        │
│         (01 – 90)            │
└─────────────────────────────┘
```

5.   Enter [2][5]. Press [SAVE]. Display will show:

```
┌─────────────────────────────┐
│ 25- Reset Data              │
│ 0-9 Default                 │
└─────────────────────────────┘
```

6.   Enter [2].
7.   System Database is now reset.   LCD will display:

```
┌─────────────────────────────┐
│      PROGRAM MODE: __        │
│         (01 – 90)            │
└─────────────────────────────┘
```

8.   You may commence database entry at this point, or exit system programming by pressing SPK key or by lifting and replacing the handset.

To Enter System Programming:

1.   Press [PRG]. Press [7].
2.   Enter Password if programmed. (New systems will not have a system password).
3.   Press [SAVE].
4.   LCD display will show:

```
┌─────────────────────────────┐
│      PROGRAM MODE: __        │
│         (01 – 90)            │
└─────────────────────────────┘
```

5.   You may begin system programming at this point.

Basic Programming Commands:

For the first time or infrequent installer, a programming overlay is provided with each Key Service Unit. This overlay, when placed on a HYBREX LCD telephone set indicates keys used during programming for easy reference. Experienced installers may program without the overlay. Both key designations are listed below.

Note: Keys listed between [ ] indicate the default keys shown on a telephone set. Keys listed between { } indicate keys displayed by the programming overlay. ***See illustration Programming Overlay on the next page.***

These commands are active while in the system programming mode

[F4]{PRG} Moves to the Top Level Programming Mode Display (does not save information entered into any field unless [SAVE] is pressed first).

[F3]{SAVE} Commits the data that is showing on the LCD display into the system database.

[DSS 1]{PREV} Moves to the previous section of any multiple part form.

[DSS 2]{NEXT} Moves to the next section in any multiple part form.

[DSS 3]{LEFT} Moves the programming cursor to the left.

[DSS 4]{RIGHT} Moves the programming cursor to the right.

[DND/CN]{DON'T CARE} Enters a Wild Card (don't care) into Account Codes or Toll control entries. LCD will display d (lower case letter "d") to indicate don't care entry.

[HOLD]{PAUSE} Inserts a Pause when programming a Speed Dial Entry or for Voice Mail Programming. LCD will display p (lower case "p") to indicate a Pause entry.

[TRF/FL]{FLASH} Enters a FLASH command as part of a Speed Dial Entry. LCD will display F (upper case "F") to indicate a Flash command. Clears a digit during other entries (Passwords, etc).

[MSG]{P->T} Enters a command to convert from pulse dialling to DTMF dialling into a Speed Dial Entry. LCD will display T (upper case "T") to indicate a tone conversion command.

[MIC/AT]{CHANGE} CHANGE key. Depending on form, it will cycle through available Programming parameters.

[TRF/FL]{CLR DIGIT} Enters a FLASH command as part of a speed dial number. Clears a digit during other entries (Passwords, etc).

[SPK]{EXIT} Exits Programming. Returns telephone to normal idle mode.

[REDIAL]{CLR ALL} Clears all digits on an entry such as speed dial or account codes.

Alphanumeric Entry:

The following table indicates the capabilities of the name programming functions if they are selected on the system. System Speed Dial, Personal Speed Dial, Stations, CO Lines and Sensors may be programmed with names.

Key 1 = (Blank Space) – 1	Key 2 = A - B - C – 2
Key 3 = D - E - F – 3	Key 4 = G - H - I – 4
Key 5 = J - K - L – 5	Key 6 = M - N - O – 6
Key 7 = P - Q - R - S – 7	Key 8 = T - U - V – 8
Key 9 = W - X - Y - Z – 9	Key 0 = (Period). : & – 0
Key # = ( ) $ #	Key * = (Dash) / ! *
DSS Key 1 = Backspace Cursor (Left)	DSS Key 2 = Cursor Forward

If an entry is made that is not within valid system parameters, the HYBREX system will not accept the entry when [SAVE] is pressed. The Speaker on the programming set will return a busy tone and the LCD Display will place the programming cursor under the offending entry. You may make corrections and press [SAVE] again. If multiple errors are made, the system will continue to return you to the illegal entries as others are corrected.

It is not necessary to re-enter existing information on a multi-item form. You need enter only the information that is to be changed. You may move the cursor to the left or right in order to access only the specific entry that you want to change.   You may press [SAVE] without regard for the placement of the cursor on the LCD display.
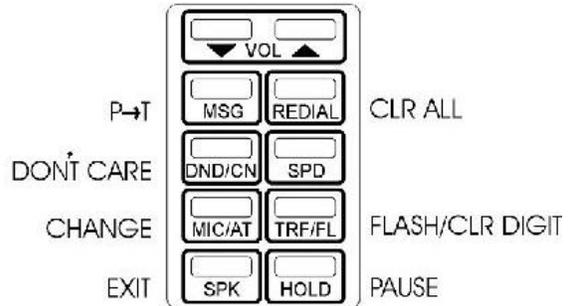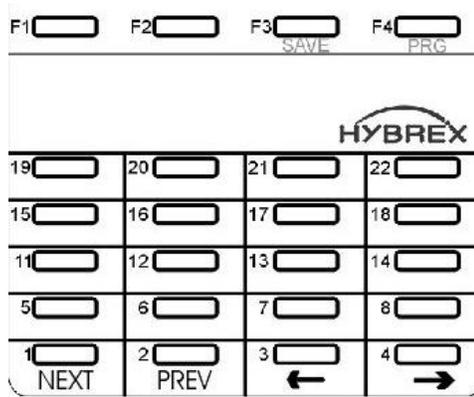
PROGRAM MODES

Program 01-tk-IP : Day Ringing And Ringing Line Preference Assignment

```
01-tk-IP FLX DAY
11  12  13  14  15
```

Tk = 01-10, IP = Item Pointer (01-16)
Assigned station number.

General:

This program assigns each incoming line to ring the programmed stations. The ringing methods can be LINEAR (ring the first available station), CIRCULAR (Ring the next station following the last station who just answered an incoming call), HUNT (Ring the first assigned station for a set period of time (program mode 05-08-01) then if no answer ring the next ring assigned station then the next etc.) or COMMON AUDIBLE (All stations will ring simultaneously). See Program Mode: 35-tk-07 to assign. An overflow Ring Hunt Group can be assigned to make additional stations ring after a time interval in addition to this ring assignment. See program Mode 29-07/08.

Description:

1. This program sets Day Time ringing.
2. The station number can be 2,3,4 digits.
3. A total of 16 stations can be assigned to ring for each trunk.
4. If the location is to be assigned to no station, the location value is set to " 0 ".
5. To clear all entries press **[REDIAL]**.

Program 02-tk-IP : Night Ringing And Ringing Line Preference Assignment

```
02-tk-IP FLX NIG
11  12  13  14  15
```

tk = 01-10, IP = Item Pointer (01-16)
Assigned station number.

General:

This program assigns each incoming line to ring the programmed stations. The ringing methods can be LINEAR (ring the first available station), CIRCULAR (Ring the next station following the last station who answered an incoming call), HUNT (Ring the first assigned station for a set period of time (program mode 05-08-01) then if no answer ring the next ring assigned station then the next etc.) or COMMON AUDIBLE (All stations will ring simultaneously). See Program Mode: 35-tk-08 to assign. An overflow Ring Hunt Group can be assigned to make additional stations ring after a time interval in addition to this ring assignment. See program Mode 29-07/08.

Description:

1. This program sets Night Time ringing.
2. The station number can be 2,3,4 digits.
3. A total of 16 stations can be assigned to ring for each trunk.
4. If the location is to be assigned to no station, the location value is set to 0.
5. To clear all entries press **[REDIAL]**.

Program 03-01-IP : Door Phone Ringing Assignment

03-01-IP Door
11 12 13 14 15

IP = 01-08
Assigned station number.

General:

This program assigns the Analogue door phone to ring the programmed stations.

Description:

1. There is one Analogue door phone port available in the G1-824.

2. Eight stations can be assigned to ring for the Analogue door phone.

3. To clear all entries press **[REDIAL]**.

4. Door phone ringing time is set in Mode 05-11-07.

5. Door Relay Unlock Time is set in Mode 05-12-04.

6. Door phone Ringing frequency is set in Mode 05-03-08.

Program 04-gp-IP : Console Assignment

04-gp-IP Console
11 12 13 14

gp = Station group (01-08) IP = 01-04
Assigned station number(2 to 4 digits).

General:

This program permits the selection of the consoles in each station group.

Description:

1. There are 8 console groups available.

2. A total of four stations can be set to be the console in each group.

3. The first assigned station is the master console.

4. To clear all entries press **[REDIAL]**. Do this in ALL unused groups.

5. It is recommended that only one console is used per group.

Program 05-01-IP : System Timing Parameters – 01

05-01-IP SYS PAR
1 1 1 1 4 2 2 1

IP = 01-08
System Default.

Item Pointer	Display Data	Programming Data Description	Timing Table	Default
01	0-9	Hold Recall Time	A	1=60 Sec.
02	0-9	Exclusive Hold Recall Time	A	1=60 Sec.
03	0-9	Hold Recall Timeout	A	1=60 Sec.
04	0-9	DISA Access Delay Time	C	1=2 Sec.
05	0-9	Busy Remind Cycle Time	C	4=8 Sec.
06	0-9	Pause Time	D	2=800 Ms.
07	0-9	DTMF Generation Time	E	2=83 Ms.
08	0-9	Call Forward No Answer TRF. Time		1=20 Sec.

General:

This programming section allows the programmer to assign different system parameters.

Description:

01. Hold recall time:

This parameter sets the time duration from when Hold is initiated to when the held call starts to ring (recall) the station.

After a pre-determined recall time (see 05-01-03: Hold Recall Timeout), if the station still does not answer, the hold call will automatically transfer to the Console.

02. Exclusive Hold recall time:

This parameter sets the time duration from when Exclusive hold is initiated to when the held call starts to recall the station.

After a pre-determined recall time (see 05-01-03: Hold Recall Timeout), if the station still does not answer, the held call will recall to the Console in addition to the holding station.

03. Hold Recall Timeout:

This parameter sets the time between a call recalling to a holding or transferring station and then recalling to the console if unanswered.

See timing table Grade A for parameters of these 3 features.

04. DISA Access Delay Time:

This parameter sets the time duration that a DISA trunk will ring prior to connection with return dial tone or VSC message. (Stations can answer during this time.)

> 0 = Automatic connection, no ring to the stations.
> 1-8 = Automatic connection after 2-254 seconds ringing.

See timing table grade C for parameters for this feature.

05. Busy Remind Cycle Time (Off-Hook Ringing):

This parameter selects the length of time an incoming trunk call rings the system before a busy ring assigned station is reminded of the call. A muted, one-second ring will be given to the station through the speaker to indicate the call. The tone will be repeated every busy remind time interval.
This parameter also sets the timing for the SLT Camp-On feature (see Mode 05-08-03 to extend timing for SLT Camp on tone) and the camp on tone for key stations.

See timing table Grade C for parameters of this feature.

06. Pause Time:

This parameter sets the system pause time duration for speed dial entry, trunk access time and voice mail call forwarding tone delay.

See timing table Grade D for parameters of this feature.

07. DTMF Generation Time:

This parameter permits the selection of DTMF Generation output time. The generation time may need to be lengthened to access some Voice Mail or answering machines.

See timing table Grade E for parameters of this feature.

08. Call Forward No Answer Transfer Time:

This parameter sets the duration between calling a station which has set call forward no answer, and the transfer of the call to the station to which it has been forwarded.

> 0 = 10 sec.   1 = 20 sec.   2 = 30 sec.   ....   9 = 100 sec.

TIMING TABLE

Grade	0	1	2	3	4	5	6	7	8	9	Unit
A	30	60	90	120	150	180	210	240	253	-	Sec.
C	0	2	4	6	8	15	30	60	120	254	Sec.
D	400	600	800	1000	1200	1400	1600	1800	2000	2200	ms.
E	48	64	80	100	114	132	156	164	180	196	ms.

Program 05-02-IP : System Timing Parameters – 02

05-02-IP SYS PAR	IP = 01-08
5 5 1 4 4 1 2 4	System Default.

Item Pointer	Display Data	Programming Data Description	Timing Table	Default
01	0-9	SLT Dial Tone Timeout	C	5=15 Sec.
02	0-9	SLT Inter-Digit Timeout	C	5=15 Sec.
03	0-9	Auto Redial Ringing Time		1=10 Sec.
04	0-9	SLT Release Signal		4=608 ms.
05	0-9	Flash Time - Key Phone	B	4=640 ms.
06	0-9	SLT Hold Signal	I	1=80 ms.
07	0-9	Ring On Time	G	2=240 ms.
08	0-9	Ring Off Time	F	4=4 Sec.

Description:

01. SLT Dial Tone Timeout:

This parameter is for Single Line Telephones. If a key is not pressed before the assigned time period expires when Dial Tone is given, a Busy Tone will be heard.

02. SLT Inter-Digit Timeout:

This parameter is for Single Line Telephones. If the interval between digits dialled exceeds the assigned time period, a Busy Tone will be given.

See timing table Grade C for parameters of these features.

03. Auto Redial Ringing Time – PSTN lines:

This parameter is the time duration for which the system will redial the telephone number automatically and then hang up during Auto Redial on PSTN lines. ISDN lines will hang up immediately if the called number is busy.

1 = 10 sec.   2 = 20 sec.   ......   9 = 90 sec.

Off Hook	Auto-Redial Pause Time (Program 05-05-08), Y seconds	Off Hook
Auto-Redial Ringing Timer	On Hook	**Auto-Redial Ringing Timer**
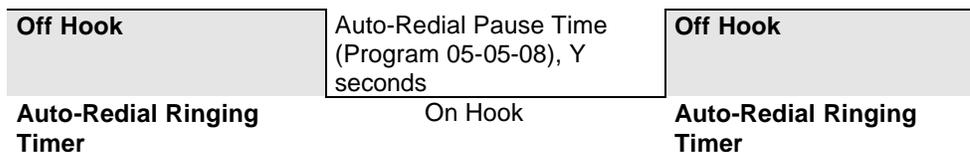
04. SLT Release Signal:

This parameter is the time duration of depressing the hook switch of an SLT that the system will see as a hang up, the system will take it as a hold signal if less than this time but longer than the SLT hook flash time.

0 = 104 ms	1 = 208 ms	2=304 ms	3 = 400 ms	4 =608 ms
5 = 800 ms	6 = 1008 ms	7 =1200 ms	8 = 1408 ms	9 = 1600 ms

05. Exchange Line Flash Time - Key Phone & Analogue Phone:

This parameter permits the selection of Flash time for Key stations when pressing the **[TRF/FL]** key or an analogue phone which presses flash and then dials 800 while connected to an outside line. After dialling 800 the flash signal will be sent to the exchange line and the analogue phone will reconnect to the exchange line.

See timing table Grade B for parameters of this feature.

06. SLT Hold Signal:

This parameter permits the selection of the Flash time from a single line telephone that the system will see as a Hold signal if the time is greater than the hold signal but less than the SLT release time.

See timing table **Grade I** for parameters of this feature.

DURING CONVERSATION	HOOK PRESSED-Period B	HOOK RELEASED
	Period **B <** SLT Release Time	**Hold**

DURING CONVERSATION	HOOK PRESSED-Period B	HOOK RELEASED
	Period **B >** SLT Release Time	**Hang Up**
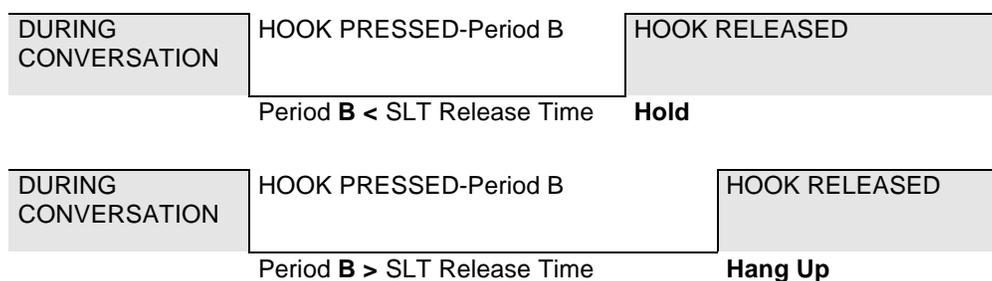
07. Ring On Time:

This parameter allows the system to identify Ring On Time Interval from the Exchange.
See timing table Grade G for parameters of this feature.

08. Ring Off Time:

This parameter allows the system to identify Ring Off Time Interval from the Exchange

See timing table Grade F for parameters of this feature.

TIMING TABLE

Grade	0	1	2	3	4	5	6	7	8	9	Unit
B	40	80	160	240	400	600	800	1000	1200	1400	ms.
B(UK)	60	80	100	120	140	160	180	200	300	600	ms.
C	0	2	4	6	8	15	30	60	120	254	Sec.
F	2	2	2	3	4	5	6	7	8	9	Sec.
G	0	160	240	360	440	560	640	760	840	960	ms.
I	64	80	104	200	304	400	512	600	704	800	ms.
J	0	30	45	60	75	90	105	120	135	150	ms.

Program 05-03-IP : System Timing Parameters – 03

```
05-03-IP SYS PAR
1 0 0 9 0 2 0 9
```
IP = 01-08
System Default.

Item Pointer	Display Data	Programming Data Description	Default
01	0-1	Make / Break Ratio	1=40/60
02	0-1	Automatic Trunk Search	0=Yes
03	0-1	Intercom Call Signalling Method	0=Voice
04	0-9,d	PABX (Centrex) Outgoing Code	9=9
05	0-9	Toll Access Code	0=0
06	2-4	Station Numbering Plan	2=2
07	0-1	Intercom Dial Tone Pattern	0=Steady
08	0-9	Door Phone / ACP Ringing Frequency	9= Background Music

Description:

01. Make/Break Ratio:

This parameter permits the selection of a Make/Break Ratio for Dial Pulse signalling.

    0 = 33/66   1 = 40/60

02. Automatic Trunk Search:

This parameter allows the system to search for an available trunk according to the assigned dial 9 trunk group when automatic dialling features are used; i.e., Speed Dial, Save Redial, Redial, etc.

    0 = Allowed   1 = Not Allowed

03. Intercom Call Signalling Method:

This parameter selects the Intercom calling method. The user can still override this selection by dialling 3 after initiating an intercom call. Individual stations can be set to automatic microphone switch-on in mode 46-st-03 and thus override the system wide ring method.

    0 = Voice Signalling.   1 = Ring Signalling.

04. PABX (Centrex) Outgoing Code: (Refer to Program 35-TK-01):

This parameter assigns the PABX outgoing call access code for Redial and Save Redial when the system is installed behind a PABX.

It is used when Trunk Lines are set to be PABX lines in Mode 35-TK-01.

This assignment also enables the system to identify whether the user's dialling is a PABX's Intercom call or an Outgoing call for toll restrictions.

05. Toll Access Code:

The first digit that is checked for verification of a toll call. This has no effect on toll restriction within the system. It is only used to notify SMDR that a particular call is a toll call. See Mode 14-01-03. With 8 digit local numbering plans in use this parameter is not always useable.

      0 = beginning with 0, 1 = 1, 2 = 2, ……..9 = 9

06. Station Numbering Plan:

This parameter assigns the number of digits used for the station numbering plan. 2, 3, or 4 digits may be used. In the G1-824 the system will set this parameter to 2 digits automatically at the time of system initialisation.

07. Intercom Dial Tone Pattern:

This parameter assigns the pattern of intercom dial tone. If the parameter is set to 0 or 1 then analogue phones will receive the special DND tone if call forward or DND has been set for that extension. Item 2 (and 6) is particularly designed for use when there is a Voice Mail system connected to the system as some Voice mail units have problems with the broken dial tone.

Setting	Intercom	DND	CFD	MW	Call Forward
0	Steady	SP.	SP.	Steady	SP.
1	Interrupted	SP.	SP.	Interrupted	SP.
2	Steady	Steady	Steady	Steady	Steady
3	Interrupted	Interrupted	Interrupted	Interrupted	Interrupted
4	Steady	SP.	SP.	Interrupted	SP.
5	Interrupted	SP.	SP.	Steady	SP.
6	Steady	Steady	Steady	Interrupted	Steady
7	Interrupted	Interrupted	Interrupted	Steady	Interrupted

MW: Message Waiting.   DND: Do not disturb.   CFW: Call Forward.

08. Door Phone Ring Pattern:

This parameter allows for different ring patterns for the Door Phone. This Parameter will also affect the ACP phone. If this mode is set to = 0 then the ACP will follow the extension ringing frequency otherwise it will follow settings in this Mode.

      0   = Continuous ring
      1-8 = Ring using Ring frequency 1 to 8 of the DK handset.
      9   = Background Music

Program 05-04-IP : System Timing Parameters – 04

05-04-IP SYS PAR	IP = 01-08
0 1 0 0 0 1 0 1	System Default.

Item Pointer	Display Data	Programming Data Description	Default
01	0-9	System baud Rate Setting	0=1200 Baud
02	0-1	Dial 9 Flag	1=Enable
03	0-8	Action for Call Duration Limiting	0=Warning
04	0-1	12/24 Hours Clock	0=12 Hours
05		Reserved	0=
06	0-4	Speed Dialling Distribution	1=200 Sets
07	0-1	Single Digit Intercom	0=Disable
08	0-4	Message Waiting Method - Analogue Phones	1=Ring

Description:

01. System Baud Rate Setting:

This parameter sets the system Baud rate setting for SMDR and CTI applications for the G2-1648. The G1-824 is fixed at 2400 BPS.

    0=1200   1=2400   2=4800   3=9600   4=19200   5=38000   7=57600

02. Dial 9 Flag:

This parameter sets if a station can access an outgoing line by dialling 9. If this parameter is disabled the station can still access an outgoing line by pressing a line key.

    0 = Can not access dial 9 feature   1 = Can access dial 9 feature

03. Action for Call Duration Limiting:

This parameter decides what action will be taken if a station has limit call duration enabled in Mode 40-nnnn-03. Settings 0 to 3 are for outgoing calls only. The outside party will also hear the warning tone.

    0 & 5 = Continuous Warning Tone after Timeout.
    1 & 6 = 1 second Warning Tone for each cycle of Limit Call Duration
    2 & 7 = At 10 seconds before Timeout, 1 second Warning Tone,
                At 5 seconds before timeout, continuous Warning Tone,
                At timeout the line is released.
    3 & 8 = At 1 minute before timeout, 1 second warning tone,
                At 30 seconds before timeout, continuous warning tone
                At timeout the line is released.

Related System Programming Mode: 05-04-03, 40-st-03

04. 12/24 Hours Clock:

    0 = 12 Hours Clock   1 = 24 Hours Clock

05. Reserved

06. Speed Dialling Distribution:

This parameter sets the number of speed dial numbers allocated to the system speed dial. Adding extra numbers to system Speed Dial reduces the number of personal Speed Dial numbers available to share between individual stations.

        0 = System 100 (100 to 199)   : Individual 500/200
        1 = System 200 (100 to 299)   : Individual 400/100
        2 = System 300 (100 to 399)   : Individual 300/000
        3 = System 400/300 (100 to 499) : Individual 200/000
        4 = System 500/300 (100 to 599) : Individual 100/000
        Numbers after backslash indicate sets available with name feature enabled.

07. Single Digit Intercom:

Single digit intercom allows the stations to call up to 5 other stations by dialling one digit only (1 to 5). This feature is for the Hotel / Motel Environment. Up to eight different groups may be programmed. If a group is not programmed with any entries then stations which are in the same number station group will be able to make intercom calls without dialling the room to room dialling prefix (6).

        0 = Disable   1 = Enable

08. Message Waiting Method for Analogue Phones:

If the setting is Ring, the analogue phone will receive 30 seconds intercom ringing every 5 minutes until the station answers.

If the setting is Voice Message, the station which is left a message will hear the voice message which is stored by the console after answering the message waiting.

If the setting is 250 ms. ring the analogue phone will receive two 250 ms. ring burst every 5 minutes. This is for use with the special telephones to turn on message lamp.

        0 = No Message Waiting   1= Ring   3 = Two 250 ms. Ring

Program 05-05-IP : System Timing Parameters – 05

```
05-05-IP SYS PAR      IP = 01-08
1 0 0 0 0 1 1 0       System Default.
```

Item Pointer	Display Data	Programming Data Description	Default
01	0-3	Morning Call Type	1=Music
02	0-1	Meter Pulse Detect	0=Enable
03	0-5	Speed Dial Unrestricted-1	0=0
04	0-9	Speed dial Unrestricted-2	0=0
05	0-7	Name Feature For Extensions, Trunks, Speed dials	0=Disable
06	0-1	Dial Tone Detection	1=Enable
07	0-9	Auto Redial Times	1=2 Times
08	0-9	Auto Redial Pause Time	0=10 Sec.

Description:

01. Morning Call:

This parameter is for the Hotel/Motel environment to decide what an extension will hear upon receiving a wake up call.

      0 = Voice message (requires VSC)
      1 = Back-ground music or DND tone.
      2 = VSC + Record Morning Call History via SMDR
      3 = Back-ground music or DND tone + Record Morning Call History via SMDR

Each station can be set in Mode 44-st-08 to decide whether to hear Background Music or DND tone.

02. Metering Detector:

If setting is Enable, the system will detect the metering signal from the Exchange during the conversation.

      0 = Enable   1 = Disable

03, 04. Speed Dial Unrestricted 1, 2:

If 03, 04 settings are A, B, then the speed dial codes from 100 to AB0 are not toll restricted. For example if the settings are 1 and 1 then Speed dials up to 110 can be used by stations whether they conflict with toll restrictions or not. Individual stations can be restricted from using this feature in Mode 45-st-07.
If 03, 04 settings are set to 0, 0, then all speed dial codes are toll restricted if the station using the speed dial is restricted.

05. Name Function:

This parameter enables the naming feature for trunks, extensions and speed dials.

Features \ Values	0	1	2	3	5	7
Display Name instead of number for Extension		V		V	V	V
Directory Dial for Speed Dial			V	V		V
Directory Dial for Extension					V	V

V: The feature is enabled.

Note 1: When any of the above features are enabled the total number of speed dial sets will be reduced by 300. See Mode 05-04-06.

Note 2: For setting name for Extension/Speed dial/Trunk, Please refer to the programming mode 43 / 09 /35.

Note 3: For setting "Directory Dial" key, Please refer to mode 07.

06. Dial Tone Detection:

If setting is enable, then the system will send out the dialling signals after the system detects the Dial Tone which is sent from the exchange, if dial tone is not detected by the system then dialling signals will not be sent out. If setting is disable, then the system will send out dialling signals whether Dial Tone is detected or not.

0 = Disable   1 = Enable

07. Auto Redial Times:

This parameter is to set the number of auto redial times which the system will attempt.

0 = 0 times	1 = 3 times	2 = 6 times	3 = 10 times	4 = 20 times
5 = 30 times	6 = 40 times	7 = 50 times	8 = 60 times	9 = 70 times.

08. Auto Redial Pause Time:

This parameter is the time duration between the system hanging up an auto redial attempt and starting to redial automatically.

0 = 10 Sec.   1 = 20 Sec.   2 = 30 Sec.   ....   9 = 100 Sec.

Off Hook	Auto-Redial Pause Time (Program 05-05-08), Y seconds	Off Hook
Auto-Redial Ringing Timer	**On Hook**	Auto-Redial Ringing Timer
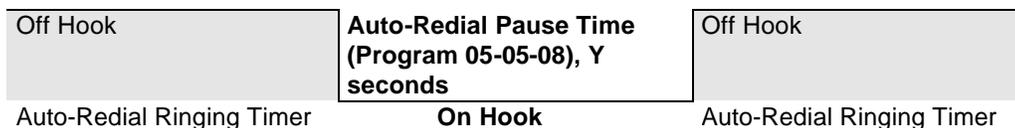
Program 05-06-IP : System Timing Parameters – 06

```
05-06-IP SYS PAR
1 0 0 1 0 3 0 0
```
IP = 01-08
System Default.

Item Pointer	Display Data	Programming Data Description	Timing Table	Default
01	0-9	TRF Busy Recall Timeout	A	1=60 Sec.
02	0-9	TRF Idle Recall Timeout	A	0=30
03	0-1	ISDN Audio		0=a law
04	0-9	Polarity Reversal		1=Enable
05	0-1	Operator Code		0=0
06	0-9	Unsupervised Conference And ECF Time Setting		3=3 Min.
07	0-1	Hold Method for SLT		0=Flash
08	0-2	Station Hunting Group Ring Method		0=Common

Description:

01. Transfer Busy Recall Timeout:

This parameter sets the time duration between transferring a call to a busy party and automatic transfer back to the transferring party when the called party is busy.

02. Transfer idle Recall Timeout:

This parameter sets the time duration between transferring a call to a station and automatic transfer back to the transferring party when the called party does not answer.

See timing table Grade A for parameters of these 2 features.

03. ISDN Audio

This parameter sets ISDN Audio type.
  0 = a law   1 = u law

04. Polarity Reversal:

This parameter is to enable the Polarity Reversal detection feature for incoming caller hang up detection in Australia and some European countries. See Mode 14-01-08 for SMDR setting. Telecom will need to enable polarity reversal at the exchange. When reversal is enabled the system will hang up the exchange line when the incoming caller hangs up and the exchange sends a reversal to the system.

  0 = Disable
  1 = Enable for 1 polarity reverse signal
  2-9 = Delay for 1-8 Seconds and then detect Polarity Reverse Signal

05. Operator Code:

This parameter is to set whether to dial "0" or "9" for the operator or for accessing a CO. line.

  1 = Dial "9" for operator, "0" for C.O. line.
  0 = Dial "0" for operator, "9" for C.O. line.

06. Unsupervised Conference and ECF Time Setting:

This parameter sets the time that the system will allow an Unsupervised Conference or External Call Forward to continue before sending a warning tone to the parties and then disconnecting the call. If either party sends a DTMF digit (0-9) to the system the timer will reset and allow the call to continue for the time setting. If reversal supervision is used it will override this setting.

  0 = No Limit 1 = 1 Min. 2 = 2 Min. 3 = 3 Min. 4-9 = 4 Min.

07. Hold Feature for SLT:

This parameter is to set whether Single Line Telephones use [FLASH] (or [Hook-switch]) or [FLASH, 7] (or [Hook-switch, 7]) to place a call on Hold.

  0 = Normal -----> Using [FLASH] or [Hook-switch] to put a call on Hold.
  1 = Alternate --> Using [FLASH, 7] or [Hook-switch, 7] to put a call on Hold.

08. Station Hunting Group Ring Method:

This parameter sets the ring method used in the station hunting groups. Pilot numbers for hunt groups are set in Mode 67 and Day/Night ring stations are set in Mode 68 & 69. Individual Hunt Group Ring type is programmable in program 67-gp-02 and will over ride the system wide setting made here.

  0 = Common   1 = Linear   2 = Circular

TIMING TABLE

Grade	0	1	2	3	4	5	6	7	8	9	unit
A	30	60	90	120	150	180	210	240	253	4	sec.

Program 05-07-IP : System Timing Parameters – 07

05-07-IP SYS PAR	IP = 01-08
0 0 2 0 0 0 0 0	System Default.

Item Pointer	Display Data	Programming Data Description	Timing Table	Default
---------	---------	---	-----------	------------
01	0-1	Intercom Searching		0=Disable
02	0-1	Toll Override Prevention from quick dial		0=Disable
03		Reserved		0=
04	0-7	DISA Transfer To Console - No Dialling		0=Enable
05	0-1	Keyphone Toll Override Prevention		0=Disable
06	0-9	SMDR Digit Mask		0=Disable
07	0-9	Meter Pulse Detect Delay Time		0=0 Ms.
08		Reserved		0=

Description:

01. Intercom Searching:

If setting is enable, when calling an internal station which is busy or does not answer, pressing [4] will call the next station which is in the same station group as the called station. If setting is disable then there will be no transfer.

    0 = Disable   1 = Enable when busy
    2 = Enable when no answer   3 = Enable when busy or no answer

02. Toll Override Prevention from quick dial:

To protect toll override control when a Keyphone selects a trunk and quickly dials one digit and overriding the toll control. If Enabled then after selecting a trunk the first digit dialled will be delayed one pause interval.

    0 = Disable   1 = Enable

03. Reserved

04. DISA Recall To Console - No Dialling:

If this function is activated, when a DISA call is answered but the caller does not dial any digits or a station number the system will recall the Operator after the assigned DISA Transfer Time no dialling (Mode 05-08-07). If this function is disabled the call will be disconnected after Transfer Time No Dialling elapses.

	0 = Recall To Operator	1 = No Recall To Operator	
Value	No dialling after the first voice announcement of VSC.	The VSC has already announced that the called station is busy or no answer.	The VSC has already announced the null number or the dialled number that has not been received completely.
0	*	*	*
1	V	*	*
2	*	V	*
3	V	V	*
4	*	*	V
5	V	*	V
6	*	V	V
7	V	V	V
Note	"*"= Transfer the incoming call to console. "V"= System will announce the VSC function 6 to the incoming call if time for no dialling exceeds the mode 05-08-07. And then, System will release the outgoing call if time for no dialling exceeds the mode 05-08-07 again.	"*"= See Mode 46-ST-04. "V"= See Mode 46-ST-04. If it is no recall to console, System will announce the VSC function 6 to the incoming call if time for no dialling exceeds the mode 05-08-07. And then, System will release the outgoing call if time for no dialling exceeds the mode 05-08-07 again.	"*"= System will transfer the incoming call to console if time for no dialling exceeds the mode 05-08-07. "V"= System will announce the VSC function 6 to the incoming call if time for no dialling exceeds the mode 05-08-07. And then, System will release the outgoing call if time for no dialling exceeds the mode 05-08-07 again.

05. Toll Restriction Override Prevention:

If the setting is Disable, after accessing a line a user will be able to use a DTMF generator directly to the network rather than the DTMF signal generated within the KSU. The result of this is that Toll restrictions can be over-ridden.
If setting is Enable, then no audio will be sent from the handset until 3 digits are received by the KSU from the key station dial pad preventing Toll restrictions being overridden. This parameter will be automatically disabled on any lines which are set to Pulse dial.

      0 = Disable   1 = Enable

06. SMDR Digit Mask:

If setting is "0", then the full length of the telephone number will be output to the SMDR. If setting is n, then the length of the telephone number will be n digits long.

      n = 0 to 9

07. Meter Pulse Detect Delay Time (CO release guard time):
This parameter is also used to insert a pause between a line being released and being able to be re-selected for outward dialling.
      See timing table grade K for parameters for this feature.

08. Reserved

TIMING TABLE

Grade	0	1	2	3	4	5	6	7	8	9	unit
K	0	1	2	3	4	5	6	7	8	9	sec.

Program 05-08-IP : System Timing Parameters – 08

```
05-08-IP SYS PAR     IP = 01-08
0 0 0 0 7 1 4 0      System Default.
```

Item Pointer	Display Data	Programming Data Description	Timing Table	Default
01	0-9	Ring Hunt Time Setting	C	0=0 Sec.
02	0-1	DSS Access To Other Trunk Group		0=Enable
03	0-9	SLT Camp On Tone		0=Disable
04	0-1	DISA Transfer Group (No Answer)		0=Station Group
05	0-8	SLT Programming digit		7=7 + Code
06	0-9	DISA TRANSFER Time No Answer or Busy		1=16 Sec.
07	0-9	DISA Transfer Time No Dialling		4=4 Sec.
08	0-1	Music source selection		0=Melody IC

Description:

01. Ring Hunt Time Setting:

If setting is n, Then when an incoming call rings the first ring assigned extension and that extension is busy, after n seconds the call will ring the second of the ring assigned extensions. If the 2nd extension is busy the call will go to the 3rd extension immediately. All stations which have been passed by the ring assignment will receive off hook busy remind. Up to 16 stations can be in the ring hunt group. If the setting is 0 then only the first ring assigned station will ring.

See timing table C for parameters of this feature.

02. DSS Access To Other Trunk group:

This feature enables or disables the ability of stations to use a DSS key to answer Ringing CO lines not in their own group.

    0 = Enable.   1 = Disable

03. SLT Camp On Tone:

This feature enables a tone to indicate call waiting for a busy Analogue phone and sets the interval between tones. The interval between tones will be the Off Hook Busy Remind Interval (t) x by the setting in this parameter. Off Hook Busy Remind Time is set in Mode 05-01-05.

    0 = Disable   1 = t x 1   2 = t x 2   ....9 = t x 9

04. DISA Transfer Group:

This parameter decides to which group an unsuccessful DISA call will be transferred if the called station has transfer enabled in Mode 46-st-04.

    0 = Console for the Called Station's group (Mode 41-st-01)
    1 = Console for the Incoming Trunk's group (Mode 36-gp)

---

05. SLT Programming Digit:

This feature changes the programming digit used by an Analogue phone to perform its programmable features. For example call forward is normally 701, If this parameter is set to 3 the call forward code will be 301. If the setting is 0 then the analogue phones cannot do programming. If the setting is 8 it is necessary to press [*][#] before accessing programming or dialling any 8 codes. This will allow the use of digits 1 to 8 as the first digit of a station number.

      0 = Disable   1 = 1xx   2 = 2xx   3 = 3xx   4 = 4xx   ....   7 = 7xx
      8 = [*][#][7] for programming, [*][#][8] to access functions beginning with 8.

06. DISA Transfer Time No Answer:

An incoming call is answered by the DISA voice message and transferred to the called extension. If the called extension does not answer after this time duration the voice card will announce the status of the station (no answer). or if the station is busy will announce the status (busy) immediately and then retry the station the number of times set in Mode 05-11-06 and depending on the settings for individual stations in Mode 46-st-04 will also transfer the call to the console of the group specified in Mode 05-08-04, transfer the call to the console only or disconnect the call.

      0 = 8 Seconds   1 = 16 Seconds   2 = 24 Seconds   ....   9 = 80 Seconds

07. DISA Transfer Time No Dialling:

This parameter sets the time that a DISA call will wait after the voice message is completed before transferring to the console if no digits are dialled by the caller. Do not set this to less than about 3 seconds for normal operation.

      0 = 0 Seconds   1 = 1 Second   2 = 2 Seconds   ....   9 = 9 Seconds

08. Music source selection

This parameter sets the Music Source for the Internal Background Music and CO Music on Hold.

Set Data	B.G.M	MOH	Set Data	BGM	MOH
0	Melody IC	Melody IC	4	Internal Source	SLT-MOH
1	External Source	Melody IC	5	External Source	SLT-MOH
2	Melody IC	External Source	6	Internal Source	Internal Tone
3	External Source	External Source	7	External Source	Internal Tone

TIMING TABLE

Grade	0	1	2	3	4	5	6	7	8	9	unit
C	0	2	4	6	8	15	30	60	120	4	sec.

Program 05-09-IP : System Timing Parameters – 09

```
05-09-IP SYS PAR    IP = 01-08
0 0 0 0 0 0 0 0     System Default.
```

Item Pointer	Display Data	Programming Data Description	Timing Table	Default
01		Reserved		0=
02	0-1	Busy Console Queuing (Intercom Calls)		0=Disable
03	0-9	Clear Forward - Loop Disconnect Detection		0=Disable
04	0-9	DISA Busy Tone Detection		0=Disable
~~05~~	~~0-1~~	~~Save Redial Numbers – 1 or 6~~		~~0=1~~
06	0-9	ACD-1 Enable Time	O	0=5 Sec
07	0-9	ACD-1 Segment 2 Recall Time	J	0=Disable
08	0-9	ACD-1 Release Time	P	0=No Release

Description:

01. Reserved

02. Console Queuing:

This feature enables the busy console(s) to have an intercom call(s) queued to it(them). If the station dials the operator (by 0 or 9) and all the consoles are busy, the system will put this call in the queue to wait for the operators to be free. The calling station will hear ring back tone instead of busy tone and the first operator in the group will receive the Busy Remind Signal. The first operator to go on-hook will receive the call.

> 0 = Disable   1 = Enable

03. Clear Forward Signal Detection - Loop Disconnect

This feature enables loop disconnection as a Clear Forward Signal.

> 0= Do not detect this signal.
> 1= The Loop Disconnecting Signal > 80 ms.   (> 80 ms. For A01X version)
> 2= The Loop Disconnecting Signal > 130 ms.   (> 160 ms. For A01X version)
> 3= The Loop Disconnecting Signal > 180 ms.   (> 240 ms. For A01X version)
> 4= The Loop Disconnecting Signal > 230 ms.   (> 320 ms. For A01X version)
> 5= The Loop Disconnecting Signal > 810 ms.   (> 400 ms. For A01X version)
> 6= The Loop Disconnecting Signal > 860 ms.   (> 480 ms. For A01X version)
> 7= The Loop Disconnecting Signal > 910 ms.   (> 560 ms. For A01X version)
> 8= The Loop Disconnecting Signal > 960 ms.   (> 640 ms. For A01X version)
> 9= The Loop Disconnecting Signal > 1010 ms.   (> 720 ms. For A01X version)

04. DISA Busy Tone Detection:

This feature allows the system to recognize busy tone from the exchange line during DISA operation for clearing down the call. Type 1 busy tone is 250 ms. on, 250 ms. off. Type 2 is 500 ms. on and 500 ms. off. Type 3 = Continuos busy tone (>3.2 seconds). Type 4 = 375 ms. on and 375 ms. Off.

> 0 = Disable   1 = Type 1   2 = Type 2
> 3 = Type 1 and 2   4 = Type 3   5 = Type 1 and 3

6 = Type 2 and 3	7 = Type 1, 2, 3.
8 = Type 4.	9 = Australian

06. ACD-1 Enable Time:

This parameter is to set the time duration before the system answers an incoming call when the ring assigned station(s) are busy, if a VSC card is fitted. The incoming call will show as a normal ring signal on the DSS key and can be answered by the operator at any time even while the voice message is playing to the caller.

See timing table Grade O for settings for this parameter.

07. ACD-1 Segment 2 Recall Time:

This parameter sets the time an ACD-1 call which has been answered by the VSC company greeting message will stay on hold in the operator queue before the system will play the second part of the ACD-1 message to apologize for the continuing delay. The call back time for the second message starts at 30 seconds and increases in 15 second increments. The message will be played to the caller every time the recall time is reached until answered by the operator or the caller hangs up.

See timing table Grade N for settings for this parameter.

08. ACD-1 Release Time:

This parameter sets the time at which the system will release the incoming caller during ACD-1 operation when it has not been answered by an operator. The system will play a warning message to the caller before releasing the call. If polarity reversal is used for incoming call clear down then this parameter must be disabled.

See Timing table Grade P for settings for this parameter

TIMING TABLE

Grade	0	1	2	3	4	5	6	7	8	9	unit
N	Dis	30	45	60	75	90	105	120	135	150	sec.
O	5	10	15	20	25	30	35	40	45	50	sec.
P	Dis	5	10	15	20	25	30	35	40	45	Min.

Program 05-10-IP : System Timing Parameters – 10

05-10-IP SYS PAR
d d d d d d d

IP = 01-08
System Default.

Item Pointer	Display Data	Programming Data Description	Default
----------	----------	--	------------
01	0-9,*,#	Leading Digit 1 For Voice Mail Forwarding	d= None
02	HOLD	Leading Digit 2 For Voice Mail Forwarding	d= None
03	DND	Leading Digit 3 For Voice Mail Forwarding	d= None
04		Leading Digit 4 For Voice Mail Forwarding	d= None
05		Leading Digit 5 For Voice Mail Forwarding	d= None
06		Leading Digit 6 For Voice Mail Forwarding	d= None
07		Leading Digit 7 For Voice Mail Forwarding	d= None
08		Leading Digit 8 For Voice Mail Forwarding	d= None

Description:

This parameter allows the system to insert digits before the call forwarded station number when the call forward is received by the voice mail port if Standard Protocol is selected. If the station numbering is only 2 or 3 digits the system will insert additional digits if the Voice Mail requires more. The last digits of the voice mail box number will still have to be the same as the station numbering for correct recognition. The HOLD key can be used to insert a pause in the DTMF tone sending and will display as a (p). The DND key is no digits sent and is shown as (d).

Example:

The *HYBREX* is set to 2 digit numbering but the voice mail requires 4 digits. The voice mail also requires a pause between answering the call and the tones being sent. Set this parameter to the following

05-10-IP SYS PAR
p 1 1 d d d d

When the call forwarded station 11 is answered by the voice mail port after the pause time the digits 1111 will be sent to the port by the system. If station 11's voice mail box is 1111 then the mailbox number 1111 will be automatically opened by the tones.

There are 2 different Voice Mail Protocols available in the *HYBREX* G series depending on the setting in Mode 05-12-05. If this mode is set to 0 then the Protocol will be the leading digits entered in this Mode plus the Station Number of the forwarded station. If Mode 05-12-05 is set to 1 then the Enhanced Protocol shown on the following page will be used.

Enhanced Protocol

Internal Call   Call Forward - All Calls (Ext)   C11 + STB + STA
                              Call Forward - Busy (Ext)   C12 + STB + STA

Internal Call	Call Forward - All Calls (Ext)	C11 + STB + STA
	Call Forward - Busy (Ext)	C12 + STB + STA
	Call Forward - No Answer (Ext)	C13 + STB + STA
	Direct Call From Extension	C14 + STA + STA
	Record Call From Extension	C15 + STA + STA
Incoming CO Line and ISDN Indial		
	Call Forward - All Calls (CO)	C21 + STB + TRK
	Call Forward - Busy (CO)	C22 + STB + TRK
	Call Forward - No Answer (CO)	C23 + STB + TRK
	Direct Call from Trunk	C24 + TRK + TRK
	Transfer Back to Voice Mail	C25 + STB + TRK

Definition:

1. CNM - 2 Digits   N: Forward Type 1-9   (1 Digit)
                         M: Leading Digit Type 1-9   (1 Digit)
2. STA: Calling Station Number (2 - 4 Digits)   3. STB: Called Station Number(2 - 4 Digits)
4. TRK: Incoming Trunk Number (2 Digits)

The station number will always be 4 digits. The number will be padded out with leading 0's
Example: C21 + STB + TRK -> Trunk number = 02, STB = 234 - DTMF --> 2 1 0 0 0 2 0 2 3 4
Answer Digit When a called station answers the System will play **[DTMF A]**.
Busy Digit. When a called station is busy the system will play **[DTMF B]**.
Disconnect Digit. The system will play **[DTMF C]** when an inside station disconnects or when a V/M is
connected to a TK which receives polarity reversal or Loop Disconnect.
These 3 functions will considerably speed up the operation of the V/M as it will not have to wait to listen to tones
to see what is happening with calls.

Answering Machine Operation:
When activated this function allows the caller to set call forward to the Voice Mail as usual but then monitor calls
to the Voice Mail from his key phone (on hook) and if they wish can lift the handset and take the call back from
the Voice Mail. To enable the user presses **[SPK] [7][7][3][1]** and to disable presses **[SPK] [7][7][3][0]**.
This feature is in the software of the **HYBREX Digimail** unit also.

Record Function:
        This function is dependant on the Recording Unit being capable of inserting the recording tone
to alert the caller they are being recorded. To record it is necessary for the Key phone to have a
[RECORD] key which is **FCN 48 .** During a call the STN presses the [RECORD] button and the Voice
Mail will answer if a port is available and the system will send the Protocol 15 + STN NO + STN No.

Voice Mail System Leading Digit Format (A01Gx or its latest version only)

1+ extension number	= CFWD All Calls	(Replaces 11 and 21eeeexxxx)
2+ extension number	= CFWD Busy	(Replaces 12 and 22eeeexxxx)
3+ extension number	= CFWD No Answer	(Replaces 13 and 23eeeexxxx)
4+ extension number	= Direct Call to Voice Mail (Station)	(Replaces 14eeeexxxx)
5+ extension number	= Call Record	(Replaces 15eeeexxxx)
6+ extension number	= Recall to Voice Mail	(Replaces 25eeeexxxx)
7+ CO trunk number	= Incoming CO Call	(Replaces 2400tt00tt)

Program 05-11-IP : System Timing Parameters – 11

05-11-IP SYS PAR
0 0 0 1 0 0 5 0

IP = 01-08
System Default.

Item Pointer	Display Data	Programming Data Description	Timing Table	Default
01		Reserved		0=
02	0-1	DISA Password – 1 / 24 Sets		0=1
03	0-2	Select Music on Hold or Ring Back Tone		0=R.B.T
04	0-1	DISA Processing Way When VSU is busy or absent		1=Wait
05	0-3	DISA Special Function Access		0=[8],[9],[*],[#]
06	0-9	DISA Re-check Times To Busy Console		0=2 Times
07	0-9	Door Phone Ringing Time		5=30 Sec.
08	0-8	DISA Single Digit Dialling		0=Disable

Description:

01. Reserved

02. Number of DISA Passwords:

This parameter when enabled will increase the number of DISA passwords from 1 to 24. At the default setting of 0 the DISA password will be set in mode 13-02. If the parameter is set to 1, 24 passwords are available and they will be the same as the forced account codes numbers (25-48). Forced account codes are set in Mode 17-(00-48).

        0 = 1 password   1 = 24 Passwords

03. Select Music on Hold or Ring Back Tone:

This parameter selects what the incoming caller will hear during Ring Transfer and Hold Recall conditions. The feature is designed for Australia to prevent the caller incorrectly recognizing the HYBREX's International Ring Back Tone as a disconnect or engaged signal and hanging up even though their call is still in progress.

        0 = Ring Back Tone   1 = Music On Hold   2 = Silence

04. DISA Processing Way When VSU is busy or absent:

Decide system how to process the DISA call when VSU is busy.

        0= When VSU is busy, the DISA party will hear the dial tone after the system answers the incoming call.
        1= When VSU is busy, the DISA call will not be answered by the system until the internal party answers
            this DISA call or the VSU is available for the service again. During VSU busy, the system will ring
            the stations assigned in Programming Mode 01 and 02.

05: DISA Special Function Access:

This parameter sets which of the system functions are able to be accessed by DISA callers.

0 = Allow users to access the DISA special functions by pressing [8],[9],[*],[#].

1 = Allow users to access the DISA special functions by pressing [*],[#].
   Disallow users to access the DISA special functions by pressing [8],[9].

2 = Allow users to access the DISA special functions by pressing [8],[9].
   Disallow users to access the DISA special functions by pressing [*],[#].

3 = Disallow users to access the DISA special functions by pressing [8],[9],[*],[#].

06. DISA Re-check Times To Station/Console:

This function sets the number of times that an unsuccessful DISA call will attempt to retry a station and or transfer to a console after the ringing time set in Mode 05-08-06 if the Voice Sectioning function is activated, depending on the setting for individual stations in Mode 46-st-04. If polarity reversal is available set this parameter to 9 and the call will continue to retry until the caller hangs up.

0 = 2 times   1 = 3 times   2 = 4 times   ....   8= 10 times
9 = Infinite times

07. Door Phone Ringing Time:

This parameter sets the time that Door Phone ring assigned stations will ring for when the Door Phone button is pressed.

0 = 5 Sec.   1 = 10 Sec.   2 = 15 Sec.   3 = 20 Sec ....9 = 50 Sec.

08. DISA Single Digit Dialling:

This feature allows a DISA caller to dial stations by 1 digit (1-5) using the settings in Mode 10-gp-IP to set which station will be dialled by each digit.

0 = Disable   1 = Dial the Stations in Group 1
2 = Dial the stations in Group 2   3 = Dial the Stations in Group 3
....   8 = Dial the stations in Group 8

Program 05-12-IP : System Timing Parameters – 12

05-12-IP SYS PAR	IP = 01-08
0 0 0 2 0 0 0 0	System Default.

Item Pointer	Display Data	Programming Data Description	Timing Table	Default
01	0-1	Call Transfer Method – Key Telephone		0=Key Phone
02		Reserved		0=
03	0-1	Exclusive hold capability		0=Yes
04	0-9	Door Unlock Relay Activation Time		2=3 Sec.
05	0-7	Voice Mail Call Forward Protocol Type / mute digits		0=Std
06	0-1	Linear/Circular Trunk group access		0=Linear
07	0-9	LED indication of Check in / Check out on DSS console		0=Disable
08	0-1	Analogue CO Line Detection		0=Disable

Description:

01. Call Transfer Method – Key Telephone:

This parameter allows users to use the same call transfer method as single line telephones on digital key telephones.
    0 = Use Key phone's call transfer method.   1 = Use single line telephone's call transfer method.

02. Reserved

03. Exclusive Hold Capability:

If this parameter is enabled all stations can use the Exclusive Hold Function. If the parameter is disabled no stations will be able to place calls on Exclusive hold.

    0 = Enabled   1 = Disabled

04. Door Unlock Relay Activation Time:

This parameter sets the time that the door unlock relay will remain activated after the Door Unlock function is activated by the user. The Door unlock relay is programmed in Mode 06.

    0 = 1 Sec.   1 = 2 Sec.   2 = 3 Sec.   .... 9 = 10 Sec.

05. Voice Mail Call Forward Protocol Selection and Muting Leading Digits

This parameter selects between Standard Voice Mail Call Forward Protocol and the Enhanced Protocol. For a full description of Voice Mail Protocol see Mode 05-10.It will also set the muting of the leading digits

Setting Value	0	1	2	3	4	5	6	7
VMS Leading Digit Type	Short	Long	Short	Long	Short	Long	Short	Long
Mute Leading Digit	No	No	Yes	Yes	No	No	Yes	Yes
Leading Digit for Auto Attendant (VMS)	No	Yes	No	Yes	No	No	Yes	No

"Short" type: Use the Leading Digit programmed in program 05-10.
"Long" type: Use 10 Leading Digits.
"Mute Leading Digit":   The caller will not hear the DTMF signal during the transmission of leading digits.
                               System will occupy the last intercom link for this feature.

Related System Programming Mode: 05-10, 05-12-05, 50-ST-05

06. Linear/Circular Trunk Group Access:

If this parameter is set to 0 then line selection will be the first available trunk in the users dial (9-0) group. If the parameter is set to 1 then the lines will be selected in a Circular fashion till all lines have been used and then the selection will start again. Do **NOT** use Circular with PSTN lines unless there is a very good reason as call collision will result.

        0 = Linear   1 = Circular.

07. LED indication of Check in / Check out:

This parameter disables or enables the LED indication for Check in/Check out features for the DSS consoles and DSS Keys.

        0 = Disable   1= Enable

The LED indications are as follows:

Red and slow flash: If the Reception has checked out an extension, the LED for extension will
                            slow flash red.
        Green: When the checked out extension's room has been cleaned by the cleaner(maid), they
                      can dial [776] from the phone and hang up. The LED for that extension will go Green.
                      This means the room is ready for a new guest.
        Red: The room is checked in and the phone is in use.
        Off: The room is checked in and idle.

08. Analogue CO Line Detection: (For U01Gx/E01Gx version only)

After enabling this setting, the system will check the analogue CO line situation each period (every hour) or when the user accesses the CO line or during POST (Power On Self Test). The bad line (no loop current) will be blocked and marked in mode 37-TK (the marked value is > 4) after being checked.

        0 = disabled   1 = enabled.

Program 05-13-IP : System Timing Parameters – 13

05-13-IP SYS PAR	IP = 01-08
0 0 0 0 0 0 0 0	System Default.

Item Pointer	Display Data	Programming Data Description	Timing Table	Default
01	0-1	Intercom Hot Key Dialling		0=No
02	0-1	Immediate SMDR output		0=Disable
03	0-1	Caller ID Buffer Block Size		0=10 Sets
04	0-9	Reserved		0=
05	0-1	CLI Record Storing Method for LCD Phones		0=No. Only
06	0-1	CTI-Trunk Status Report		0= Disable
07	0-7	Least Cost Routing(LCR) – Weekly Holiday 1		7= Sunday
08	0-7	Least Cost Routing(LCR) – Weekly Holiday 2		6= Saturday

Description:

01. Intercom Hot Key Dialling:

This parameter when enabled allows stations to dial a call On Hook without having to lift the handset or press the **SPK** key.

   0 = Disable   1= Enable

02. Immediate SMDR output

This parameter when enabled will send the SMDR output to the PC/Printer immediately a call is made. This allows external software to know who is dialling out or who is ringing into the system at this moment. In applications such as the Internet Cafe, when the customer dials out, the system will send out the SMDR information immediately. The external software can then start to count the cost from the beginning of the call. If the credit is 1 hour and time is expired, the external software could cut the connection by sending commands back to the KSU. Or any other applications similar to this example could use the feature.

   0 = Disable   1= Enable

03. Caller ID Buffer Block Size
This sets the block size of the Caller ID buffer:

05-13-03	Memory Block Size	Max. Memory blocks
0	10 sets	24
1	20 sets	12
2	30 sets	8
3	40 sets	6

Refer to Mode 83 to allocate the buffers to the use of LCD Digital Phones.

05. CLI Record Storing Method For LCD Phones:

This parameter chooses which records and how many are stored for LCD phones when CLI is fitted to the system..

0= Store CLI telephone numbers .
1= Store CLI telephone numbers and names together.

If mode 05-13-05 = 1, pressing [CLI History] key, system will display CLI number and name. Pressing [MIC/AT] will display the date/time the call took place.

06. CTI-Trunk Status Report

Enabling this parameter will output the trunk status report for CTI applications. Currently 4 is the correct setting for Ct Star applicatiions

　　　　0= Disable　　　1=Enable　　　4= Enable Trunk output & 50-st-04

07. Least Cost Routing – Weekly Holiday 1

This parameter set the first weekly holiday for Least Cost Routing feature.

　　　0 = No weekly holiday, 1= Monday, 2= Tuesday …. 7= Sunday

Related system Programming: 05-13-07. 05-13-08, 75, 76, 77, 78-st-01, 78-st-02

08. Least Cost Routing – Weekly Holiday 2

This parameter set the second weekly holiday for Least Cost Routing feature.

　　　0 = No weekly weekend, 1= Monday, 2= Tuesday …. 7= Sunday

Related system Programming: 05-13-07. 05-13-08, 75, 76, 77, 78-st-01, 78-st-02

Program 05-14-IP : System Timing Parameters – 14

05-14-IP SYS PAR	IP = 01-08
0 0 0 0 0 0 0 0	System Default.

Item Pointer	Display Data	Programming Data Description	Timing Table	Default
----------	----------	---	----------	------------
01	0-1	ISDN Recovery		0=Disable
02	0-7	G2-PIU Card Type		0 = E1
03	0-1	G2-PIU ISDN PRI Type		0= ETSI
04	0-1	MDC (Meter Pulse) Detection Frequency		0=12K Hz
05	0-1	ISDN CLI Send		0=Enable
06	0-1	ACP Case Open Alarm		0=Enable
07	0-2	Meter Pulse Detection Sensitivity - 1		0=High
08	0-9	Meter Pulse Detection Sensitivity - 2		0=High

Description:

01. ISDN Recovery (G1-824)

This parameter enables different recovery functions for ISDN line under poor ISDN connection or environment.

    0= Disable

    1= Recover every minute while idle   2= Recover every minute always

THIS PARAMETER MUST ONLY BE USED IF THE ISDN IC'S ON THE SIU ARE V1.1 (SIEMENS MANUFACTURED)

02. G2-PIU Card Type:

G2-PIU Card Type:

    0= E1 interface[*1]   1= T1 interface[*1]   2= ISDN PRI/E1[*1]   3= ISDN PRI/T1[*1]

    4= E1 interface[*2]   5= T1 interface[*2]   6= ISDN PRI/E1[*2]   7= ISDN PRI/T1[*2]

[*1]: NT site (Central Office Site) assigns available channel to use.

[*2]: System assigns fixed channel to use for individual CO lines.

    T1 and ISDN PRI/T1:

        CO 1 uses time slot 0,   CO 2 uses time slot 1,   ….,   CO 23 uses time slot 23

        Time slot 23 is for CCS signalling.

    E1 and ISDN PRI/E1:

        CO 1 uses time slot 1,   CO 2 uses time slot 2,   ….,   CO 15 uses time slot 15

        CO 16 uses time slot 17, CO 17 uses time slot 18,   ….,   CO 30 uses time slot 31

        Time slot 0 is for sync and time slot 16 is for CCS signalling.

    Australian setting is 2 or 6

03. ISDN PRI Type:

    0= ETSI PRI(E1) / NI2 PRI(T1)   1= AT&T 5ESS PRI(T1)

Australian setting is 0

04. MDC Meter Pulse Detecting Frequency:

0= 12K Hz   1= 16K Hz

05. ISDN CLI Send

This parameter disables the sending of individual caller id information from stations during Call setup. Once a DID number is programmed to an extension then this number will be forwarded to the Central Office during Call Setup with possible undesirable results. The customer may wish to protect the privacy of the individuals DID number and also if the customer has had the Central Office block Caller ID Presentation this will over ride that setting and send the CID anyway.

0 = Enable   1 = Disable

06. ACP Case Open Alarm

This parameter sets the Case Open Alarm for the ACP phone. If the case is tampered with the alarm will ring all stations as a Fire Alarm.

0 = Enable   1 = Disable

07, 08. MDC Meter Pulse Detection Gain sensitivity:

If 07, 08 settings are A, B, then the G1-MDC detection gain sensitivity is AB (AB = 00 ~ 27).
00 is high sensitivity and 27 is low sensitivity.

Program 05-15-IP : System Timing Parameters – 15

05-15-IP SYS PAR
0 0 0 0 0 0 0 0

IP = 01-08
System Default.

Item Pointer	Display Data	Programming Data Description	Timing Table	Default
----------	----------	--	----------	------------
01	0-7	Extended VMU Service		0=Disable
02~04		Reserved		0=
05	1-3	ISDN Primary Rate Trunk Numbers-A		2=2x
06	1-9	ISDN Primary Rate Trunk Numbers-B		0=x0

Description:

01. Extended VMU Service:

This parameter selects the extended service for G2-VMU card.

Setting Value	0	1	2	3	4	5	6	7
Select VMU announcing way for date/time stamp English way: X Chinese way: V	X	V	X	V	X	V	X	V
Use two language Service Single language service: X Two languages service: V	X	X	V	V	X	X	V	V
Use extended company greeting Standard (20 sec.): X Extended (40 sec.): V	X	X	X	X	V	V	V	V

   05. ISDN Primary Rate Trunk Numbers A:

   06. ISDN Primary Rate Trunk Numbers B:

These 2 parameters set the Trunk allocation for the ISDN primary rate card.
If station slot 1 is used then if the maximum number of ISDN trunks is greater than 18 then no TKU cards can be installed.
If the maximum number of ISDN trunks is less than 18 then 3 TKU cards can be installed.
If the maximum number of ISDN trunks is less than 24 then 2 TKU cards can be installed.

Program 05-16-IP : System Timing Parameters – 16

05-16-IP SYS PAR	IP = 01-08
0 0 0 0 0 0 0 0	System Default.

Item Pointer	Display Data	Programming Data Description	Timing Table	Default
01-06	0-1	Reserved for future use		
07	0-1	Output Access Control Data		0=CTI Protocol
08	0-3	ISDN Event Monitor		0=Disable

Description:

07. Output Access Control Data:

This feature allows system to output Access Control Data for ACP device via RS232 port.
   0 = Use CTI protocol to output
   1 = Use plain text output

Plain Text Format:
mm/dd hh:mm gg cccc fc <CR><LF>
   mm/dd: Month and Date
   hh:mm: Time
   gg: Gate Number (ACP)
   cccc: Proximity Card Number
   fc: Force Account Code Number
   <CR>: Carriage Return
   <LF>:   Line Feed

For example,
02/28 16:58 01 0002 02 <CR><LF>

08. ISDN Event Monitor:

This feature allows system to record the ISDN events for maintenance purposes. All output will go through RS232 port.
   0 = Disable ISDN Event Monitor feature
   1 = Enable ISDN Layer 2 Event Monitor feature
   2 = Enable ISDN Layer 3 Event Monitor feature
   3 = Enable ISDN Layer 2 & Layer 3 Event Monitor feature

SMDR and CTI feature must be disabled before using this feature.

Program 06-IP : Relay Assignment

| 06-St-01 Relay 00 | IP = 01
System Default. |

Item Pointer	Display Data	Description
00(00)	00-06	Relay of MSU/MSC
xxxx	00-06	Relay of ACP (extension: xxxx)

Description:

MSU/MSC card and ACP device have 1 dry contact relay.

No voltage is provided by the system, the installer will have to provide their own source to suit the application. Only use the relays to switch 24V DC / 90V AC at 1A. They are only designed for low voltage control circuits. All Relays are Normally Open contacts and will close on activation of the function for which they have been programmed.

Assign the required Relays one of the following functions.

Set data	Function
00	No Operation
01	Music On Hold
02	Door open
03	Reserved for future use
04	Trunk loud bell
05	Station loud bell
06	System Alarm

MSU/MSC card and ACP device have 1 dry contact relay.

Program 07-gp-IP : Flexible Key Group Assignment

07-gp-IP KEY GRP TK: **nn**	Gp = 01-08 IP = 01-25 (DSS Key Number) TK number for the key

07-gp-IP KEY GRP **xxx**	Gp=01-08 IP=01-25 (DSS Key Number) Station numbe r for the key

07-gp-IP KEY GRP FN: **ff**	Gp=01-08 IP=01-25 (DSS Key Number) Function number for the key

General:
This program assigns 8 groups of Flexible key plans for Key phones.
Each Key phone can be assigned to use two groups (Mode 41-st-(02 & 03)).

Description:
Each key can be assigned as either a **Trunk**, a **Station** or a **Function**.
To change the assignment from TK to Station or to Function or vice versa, press the **{Change}** key before setting.

nn = 01-10 - Trunk Key (1 to 10) **xx** = 10-69 - Station Key (2 digits)
xxx= 100-699 - Station Key (3 digits) **xxxx** = 1000-6999 - Station Key (4 digits)
ff = 00-65 - Function Key (0 to 65)

ff Code	Function
00	One Touch DSS Speed Dial
01	Program
02	**D**o **N**ot **D**isturb/Conference
03	**M**essage **W**aiting/**P**ulse-**T**one
04	Microphone/**AUTO** answer
05	Speed **D**ial
06	**SAVE**
07	**R**edial
08	Reserved
09	**F**orced **A**ccount **C**ode
10	Voice Set up
11	User Speed Dial Set up [3]
12	Console User Speed Dial Set up[3]
13	Console System Speed Dial[3] Set up
14	**S**ecurity **C**ode **S**et up
15	Help List[3]
16	**T**emporary **S**ecurity **C**ode
17	**Check In**[3]
18	**Check Out**[3]
19	Charge Inquire[3]
20	All Paging (Internal)
21	All Paging (External)
22	All Paging (Internal/External)
23	Zone Paging (Internal)

24	1A2 Emulation Privacy
25	Zone Paging (Internal) 2 Or Voice Mail Transfer Key (A01Gx version only)[1]
26	Swap (Call Split) [2]
27	Answer Machine Emulation
28	Zone Paging (Internal) 5
29	Zone Paging (Internal) 6
30	Zone Paging (Internal) 7
31	Zone Paging (Internal) 8
32	CLI History
33	Zone Paging (External) 1
34	Voice Mail On Line Record
35	Pickup Own Group
36	Pickup All Groups
37	Pickup Group
38	Loop Key Group 1
39	Loop Key Group 2
40	Loop Key Group 3
41	Loop Key Group 4
42	Loop Key Group 5
43	Loop Key Group 6
44	Loop Key Group 7
45	Loop Key Group 8
46	Toll Password
47	Console- Morning Call Assign

48   Alarm Assign

ff Code	*Function*		
49	Console- Set up Alarm	60	Door Phone
50	Console- Set up System Time	61	Reserved
51	Message Select[*3]	62	Directory key (for name search)
52	Day / Night	63	Pre-dial key
53	Call Forward		
54	Forward Busy[*3]		
55	Forward No Answer[*3]		
56	Meet me Page		
57	Shift Key		
58	Meter Rate Setting[*3]		
59	Hotel/Motel Function		

Note:

- [*1]: Extension during call can press this function button to hold call and the system will request input Mail Box, at this time, this extension can key in extension mail box or press [DSS-ST] to input Mail Box number, after the extension inputs Mail Box, this call will be transfer to Hunt Group 1, and after the Voice Mail answers call, the system will send "9#" + [Mail Box number] to Voice Mail.

- [*2]: Extension during call can press this functional button to swap (Call Split) two calls between two trunks.
  Related System Programming Mode: 07(code 26), 44-st-03

- [*3]: For A01Xx version, it's no function.
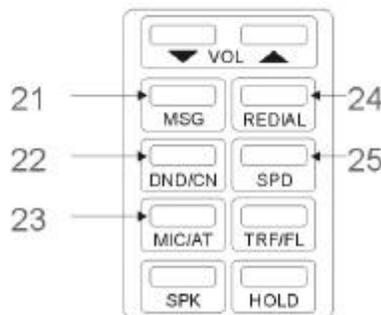
DSS key position

Program 08-gp-IP : Flexible DSS Console Key Group Assignment

08-gp-IP KEY GRP TK: **nn**	Gp = 01-02 IP = 01-60 (DSS Key Number) TK number for the key

08-gp-IP KEY GRP **xxx**	Gp=01-02 IP=01-60 (DSS Key Number) Station number for the key

08-gp-IP KEY GRP FN: **ff**	Gp=01-02 IP=01-60 (DSS Key Number) Function number for the key

General:
This program assigns 2 groups of Flexible key plans for DSS consoles.

Description:
Each key can be assigned as either a **Trunk**, a **Station** or a **Function**.
To change the assignment from TK to Station or to Function or vice versa, press the **{Change}** key before
setting.

  nn = 01-**32** - Trunk Key (1 to **32**)   **xx** =   10-69 - Station Key (2 digits)
  xxx= 100-699 - Station Key (3 digits)   **xxxx** = 1000-6999 - Station Key (4 digits)
    ff = 00-65 - Function Key (0 to 65)

Note: For function code ff, please refer to mode 07. There is no shift key function for DSS console.

Program 09-nnn-DP : System Speed Dial

09-nnn-DP TK:tt nnnnnnnnnnnnnnnn	nnn = 100-599 DP = 01-30 tt = 01-10 Telephone number.

General:

This program permits the assignment of up to 500 sets of system speed dialling codes.

Description:

nnn	= 100-599	= Speed dial code, up to 500 sets in total.
DP	= 01-30	= Digit Pointer for telephone number.
		30 digits per speed dial code.
tt	= 01-10	= Pre-assigned CO line number.

Pre-Assigned CO Line:

Press the **{Change}** key to change or clear the Pre-assigned CO line number. This CO line is the dedicated outgoing line for the speed dial code. If the user presses a speed dial code without selecting a CO line first, the system will select this CO Line automatically. If no CO line is assigned, the system will select an available CO line according to the assigned Dial 9 group (Program 41-nnnn-04). A line may also be selected directly by the user.

Telephone Number:

30 digits maximum may be entered in each memory.
In addition to the digits 1 to 0, *, # the following can also be stored: Pause, Flash, Pulse to DTMF. Each function occupies one digit.

"Pause" is represented by the **[HOLD]** key.	-- P
"Flash" is represented by the **[TRF/FL]** key.	-- F
"Pulse to DTMF" is represented by the **{P->T}** key.	-- T

i) Pause:
During dial procedures on PSTN line, the dialling will wait for a programmable period(Refer Program 05-01-06).
During dial procedures on ISDN line, the dialling will wait for the called party answers the call.

For example,
Store 29611356ppp506 in speed dial and use this speed dial on ISDN line to dial out. System will dial DTMF after the called party answers the call (it could be the auto attendant or voice mail) and send '506' by using DTMF code.

ii) Flash : This will make a loop disconnection of a pre-assigned duration.
(Refer program mode 05-02-05).

iii) Pulse to DTMF : If the dialled signal is "pulse", it will change to "DTMF".

Note: Pressing **{Don't Care}** will erase the digit which the cursor is on.
Pressing **[REDIAL]** will erase all the assigned digits.

Program 10-GP-IP : Intercom or DISA Single Digit Assignment

10-gp-IP S.D.I**.** 00 00 00 00 00	Gp = 01-08, IP = 01-05 (digit 1 to 5) Station number for digit 1 to 5

General:

This program permits the stations in one or more station groups to call a specific station by dialling one digit only. The settings in this Mode are used by DISA Single Digit Dialling (see Mode 05-11-08 to enable).

Description:
Single Digit Intercom.

When single digit dialling is enabled then the Station to station call pre-fix digit (6) must be dialled to call another extension.
If a particular group has no entries programmed, the stations in the same number station group will not have single digit dialling and will not have to use the station to station prefix.

Single Digit DISA.

When single digit dialling is enabled and a group (1-8) selected in Mode 05-11-08 then DISA callers will be able to dial the stations in the group selected by dialling the digits 1 to 5. The digit 1 will call the first station in the group, 2 will dial the second station in the group and so on up to digit 5. The caller can also dial 6 and then dial a full extension number to call other extensions or dial (0 or 9) to call the operator.
If a position is left programmed to 0 then station numbers starting with the digit, which corresponds, to this position can be dialled in full.

Example

10-gp-IP S.D.I**.**   11 13 22 00 55

In the above example an incoming DISA caller who dials 1 will call station 11, dialling 2 will call station 13, 3 will call Station 22. Dialling 4 will allow the caller to dial the full extension number of any extension, which starts with 4, e.g. 44. 55 has been assigned as a Hunt Group Pilot number so a DISA caller dialling 5 will call the Station hunting group which has 55 as it's pilot Number. Pilot numbers are set in Mode 67 and Hunt groups are programmed in Mode 68 and 69.

Program 11-IP : Date and Time Setting

| 11-IP Date/Time
08 27 87 18 16 4 | IP = 01-06
Setting Data |

Item Pointer	Display Data	Programming Data Description
01	01-12	Month.....................
02	01-31	Day.......................
03	00-99	Year.....................
04	00-23	Hour.....................
05	00-59	Minute...................
06	1-7	Week day (Monday = 1, Tuesday = 2)..

General:

This program permits the setting of system Date & Time. **Description:**

The Date & Time will be held during a power failure on the G1-824 if G1-MSC is fitted, there is no need to reset the Time after power is restored. The Real Time Clock is standard on the G2-824.

Program 12-nn : System Alarm Clock

| 12-nn Alarm
hh mm dd | nn = Alarm schedule (01-10)
Setting Time |

Location Pointer	Display Data	Programming Data Description
hh	00-23	Hour.
mm	00-59	Minute.
dd	00-99	Duration.

General:

This program permits the assignment of 10 time schedules for alarm clock purposes.

Description:

When the assigned time is reached, Background music will be broadcast over all Key telephones, which are idle.
The time duration for alarm clock music is programmable (00 to 99 minutes.).

Program 13-nn : Password

| 13-nn Password
dddddddd | nn = Password Assigned (01-08)
Setting password |

General:

This program permits the assignment of 9 different passwords in the system.

Description:

The password length is from 1 to 8 digits. All unused digit positions must have **'d'** entered in them.

Password No. 1 = Programming Password. System Default is None.

Password No. 2 = DISA Password. System Default is 3472.

Password No. 3 = Toll Free. System Default is 8655.

Password No. 4 = DISA Monitor Password.

Password No. 5 to 6 = Future

Password No. 7 = VMU Password.

Password No. 8 to 9 = Future.

Program 14-01-IP : SMDR Specifications

```
14-01-IP S.M.D.R.     IP = 01-08
0 0 0 0 0 21 0 0      System Default
```

Item Pointer	Display Data	Programming Data Description	
--------	----------	--	---------------------
01	0-9	Call Duration Start Time	0=00 Sec.
02	0/1	Record Incoming Call	0=Record
03	0/1	Record Local Call	0=Record
04	0/1	Record Incoming Call No Answer	0=Record
05	0/1	Print out the Title	0=Yes
06	00-99	Number of records between titles	21=21
07	0-	....	0=
08	0-3	Polarity Reversal	0=No

General:

This program assigns SMDR parameters.

Description:

01. Call duration start time:

This parameter assigns the start time for the Call duration timer.

0 = 00 seconds	1 = 05 seconds	2 = 10 seconds	3 = 15 seconds
4 = 20 seconds	....	9 = 45 seconds	

02. Record Incoming Calls:

This parameter decides whether incoming calls will be recorded.

0 = Record   1 = Do not Record

03. Record Local Calls:

The system decides which are local calls by the toll access code set in Mode 05-03-05.

04. Record Incoming Calls No Answer:

This parameter decides whether unanswered incoming calls will be recorded.

0 = Record   1 = Do not Record

05. Print out the Title:

This parameter decides whether the system will output the description of each column.

0 = Print out the Title.   1 = Do not print out the Title.

06. Number of records between the Title:

This parameter permits the assignment of the number of records between each Title. If the Number = 00, The whole SMDR feature will be disabled.

07. Reserved:

08. Polarity Reversal:

If reversal is disabled, the system will start the call timer after accessing a CO line.
If reversal is enabled, the system will start the call timer after the called party answers.

      0= Not Detect P.R. / Normal SMDR format output
      1= Detect P.R. / Normal SMDR format output
      2= Not Detect P.R. / Simple SMDR format output
      3= Detect P.R. / Simple SMDR format output

SMDR OUTPUT DATA FORMAT

ST.	TK	S	TELEPHONE NUMBER	Account	MM/DD	START	DURATION	RING	UNIT
112	01		001188629645752	12345678	10/02	08:35	00:02'35"		
115	02		Incoming	87654321	10/02	08:45	00:10'20"	00'10"	
000	03		Incoming no answer		10/02	12:00		00'35"	
112	04		001188629645752	FAC:01	10/02	12:10	00:02'00"		
112	03	X	FAC or PSW error		10/02	12:30			
112	05	X	001		10/02	12:35	00:00'05"		
121	01	#	0294150100		10/02	14:15	00:00'55"		
117	01	*	0294150100		10/02	14:15	00:03'10"		
D3	05		0418220212		10/02	21:01	00:02'30"		
D-03	D		<< D I S A OFF >>		10/02	21:00	00:02'40"		
112	02		DDI Num: 94150112		10/02	08:45	00:10'20"	00'10"	
	03		CLI NoAns:294176288		10/02	12:00	00:00'00"	00'35"	
111	05		CLI Num: 294150100		10/02	12:35	00:00'05"	00'05"	
	05		DDI NoAns:94150112		10/02	12:37	00:00'00"	00'27"	

TITLE DESCRIPTION:

ST = Station No.   : 11 to 6999, D = DISA
TK = Trunk No.   : 01 to 10,
S = Status   : # = Hold, * = Answered the hold, X = Cut off by toll restrictions.
Telephone Number   : First 24 digits
Account   : 8 digits in total
MM/DD   : Month/Day
Begin_Time hh:mm   : The start time of accessing the trunk line.
Duration_Tm hh:mm:ss   : Time duration of the call.
Ring_Tm   mm:ss   : Incoming ring time.
Unit   00000   : Meter Pulse Count

CASE EXPLANATION:

CASE 1: October 2, 08:35 A.M., Station 112 made a call (telephone No. is 00116495256611) through line 1. The call lasted 2 minutes and 35 seconds, Account code No. 12345678 was entered for the call and 12-meter pulses were recorded.

CASE 2: October 2, 08:45 A.M., An incoming call on line 2, rang for 10 seconds, station 115 answered the call and stored an Account No. 87654321.

CASE 3: October 2, 12:00 P.M., An incoming call through line 3, rang for 35 seconds, no one answered and the call was abandoned.

CASE 4: October 2, 12:10 P.M., Station 112 made a Long Distance call through line 4 by Forced Account Code 1 and 23 meter pulses were recorded.

CASE 5: October 2, 12:30 P.M., Station 112 made a call by Forced Account Code but was denied because of a wrong code.

CASE 6: October 2, 12:35 P.M., Station 116 made a call, which was restricted.

CASE 7: Line 1 was used by station 121 for 55 seconds then put on hold. One meter pulse was recorded against this station for its section of the call.

CASE 8: The held line 1 was answered by station 117 and he occupied the line for 3 minutes and 10 seconds. Four meter pulses were recorded against this station for its section of the call.

CASE 9: Incoming Line 3, using the DISA function, made an outside call 018220212 on line 5. The Duration time is for line 5. 3 meter pulses were recorded for this call.

CASE 10: DISA is completed. The Duration time is for line 3.

CASE 11: Incoming call on an ISDN system. The number displayed is the Indial number dialled by the calling party. The system can be programmed on a station by station basis to select whether calls to that station will display the Indial number dialled or the CLI information of the incoming caller

CASE 12: An incoming call rang for 35 seconds and no one answered. The CLI number of the calling station is displayed.

CASE 13: An incoming call on line 5 (ISDN) was answered by station 111. The SMDR displayed the CLI number (294150100) of the calling party and the extension number (112) of the calling party. The extension number shown is what the system will receive if the call is from another Hybrex with **ISDN**. The format may be different or non-existent from other telephone systems or on PSTN lines. The system can be programmed on a station by station basis to select whether calls to that station will display the Indial number dialled or the CLI information of the incoming caller. The number 94150100 is the pilot number of the Indial group.

CASE 14: An incoming call rang for 27 seconds and no one answered. The Indial number the calling station dialled is displayed.

SMDR OUTPUT DATA FORMAT - With CLI Output

```
ST.   TK S  TELEPHONE NUMBER     Account   MM/DD   START  DURATION    RING      UNIT
 112  01    001188629645752      12345678  10/02   08:35  00:02'35"             00012
 112  02    DDI Num:94150112               10/02   08:45  00:10'20"   00'10"
      03    CLI NoAns:294176288            10/02   12:00  00:00'00"   00'35"
 111  05    CLI Num:  294150100            10/02   12:35  00:00'05"   00'05"
      05    DDI NoAns:94150112             10/02   12:37  00:00'00"   00'27"
```

Case 1: Outgoing call. All information remains as before.

Case 2: Incoming call on an ISDN system. The number displayed is the Indial number dialled by the calling party. The system can be programmed on a station by station basis to select whether calls to that station will display the Indial number dialled or the CLI information of the incoming caller

Case 3: An incoming call rang for 35 seconds and no one answered. The CLI number of the calling station is displayed.

Case 4: An incoming call on line 5 (ISDN) was answered by station 111. The SMDR displayed the CLI number (294150100) of the calling party. The system can be programmed on a station by station basis to select whether calls to that station will display the Indial number dialled or the CLI information of the incoming caller. The number 94150100 is the pilot number of the Indial group.

Case 5: An incoming call rang for 27 seconds and no one answered. The Indial number the calling station dialled is displayed.

Note: Maximum of 25 SMDR records can be stored in the system temporarily.

Program 17-nn : Forced Account Code

17-nn FCAC CODE _____ **DN**

nn = Forced Account Code (01-**48**)
Forced account code (8 digits max.) Day level-Night Level

General:

This program creates **48** Forced Account codes.

Description:

The forced account code will temporarily override a station's toll restrictions.
48 codes of up to 8 digits maximum are allowed. If the system is fitted with a call accounting output the entry for a call made using a forced account code will display the code used in the account code column. The actual numbers of the code will not be displayed for security reasons, the reading will show FAC:XX. XX is the forced account code number 01 to **48**.

The Forced Account Code will not be displayed on the screen of Executive phones when it is entered.

Digit "d" is keyed in by **{Don't care}** button and means " Any digit " ("don't care").

Digit "_" is keyed in by **[TRF/FL]** button and means " No digit ".

Clear all digits by pressing **[TRF/FL]** to insert a line in place of the original entry.

G2-1648 - The last two digits DN are for toll class selection – Day and Night. The forced account code will open the call from the stations normal class to the Class set for Day and Night.
D: for Day time Toll Class.
N: for Night time Toll Class.

Do not use Redial to clear forced account code entries as this will insert "don't care" which will allow any digit as a forced account code.

The Forced Account Codes may also be used as DISA passwords to allow call accounting to show which user was making an external call using DISA from outside the system. In the GDS-600, Forced Account Codes 25 to 48 can be used for this purpose. This feature will need to be enabled in Mode 05-11-02.

Program 18-nn-TK : Assign Toll Plans To Trunk Lines

18-nn-tk Toll 0000000000	nn = Toll plan number (00-09), tk = (01-10) Toll class for each trunk (class 0-9)

General:

This Mode assigns Toll Plans to trunk lines. The Toll plans are to be written in Modes 51 to 59 and 61 to 66.

Description:

10 toll plans can be used.

Each Toll Plan assigns each trunk line a Toll Class. It is possible to allow a toll class to have different restriction level on a line by line basis.

Example 1: Mode 18-00 is set to 0000ddddd. Any station in the system which is set to toll class 0 will be unrestricted on lines 1 to 4 but will be unable to dial out on lines 5 to 10.

Example 2: Mode 18-01 is set to 111100dddd. Any station in the system which is set to toll class 1 will be restricted by toll class 1 on lines 1 to 4, will be unrestricted on lines 5 and 6 but will be unable to dial out on lines 7 and 10.
To assign toll plans to stations, see Program **41-st-05, 41-st-06**.

Toll Classes:

Class	Function	Prog. Mode
0	Unrestricted	Default
1	Use Mode 51 for the Unrestricted numbers. Use Mode 61 for the Restricted numbers	Mode **51,61**
2	Use Mode 52 for the Unrestricted numbers. Use Mode 62 for the Restricted numbers	Mode **52,62**
3	Use Mode 53 for the Unrestricted numbers. Use Mode 63 for the Restricted numbers	Mode **53,63**
4	Use Mode 54 for the Unrestricted numbers. Use Mode 64 for the Restricted numbers	Mode **54,64**
5	Use Mode 55 for the Unrestricted numbers. Use Mode 65 for the Restricted numbers	Mode **55,65**
6	Use Mode 56 for the Unrestricted numbers. Use Mode 66 for the Restricted numbers	Mode **56,66**
7	Use Mode 57 for the Unrestricted numbers.	Mode **57**
8	Use Mode 58 for the Unrestricted numbers.	Mode **58**
9	Use Mode 59 for the Unrestricted numbers.	Mode **59**
*	Use Mode 51-56 for unrestricted numbers. Use Mode 61-66 for all restricted numbers	
D	**Cannot access the trunk line.**	

Program 19-CN-IP : Voice Service (VSC) Assignment-G1 824

```
19-01-IP VSC
00 00 00 00 00
```

IP = 01-08
Function of Voice segment on VSC

General:

This program assigns voice services to segments of the VSC for the G1824 only . The VSC Access Code is 86.

Description:

IP = 01 Voice segment number 01.   IP = 05 Voice segment number 05.
IP = 02 Voice segment number 02.   IP = 06 Voice segment number 06.
IP = 03 Voice segment number 03.   IP = 07 Voice segment number 07.
IP = 04 Voice segment number 04.   IP = 08 Voice segment number 08.

Eight voice segments are valid for the VSC card that can be assigned one of 18 functions.

Set data	Function
00	No-Operation
01	DISA: Company greeting message (on answer)
02	DISA: Message to tell the outside party that the called extension is **Busy**.
03	DISA: Message to tell the outside party that the called extension is **not answering**.
04	DISA: Message to tell the outside party that the extension number is **Not-Valid.**
05	DISA: Message to tell the outside party the Console(s) is(are) busy, please wait.
06	DISA: Message to tell the outside party the DISA Time duration has expired.
07	DISA: Message to tell the outside party that the Console(s) is(are) still busy, this line will be disconnected, please call again later.
08	DISA: Night greeting message (on answer).
09	ECF: Message to advise caller that the call is being external call forwarded.
10	ACD: Message to tell caller that the operator(s) are busy, please wait
11	ACD: Message to tell caller that the operator(s) are still busy, please wait.
12	ACD: Message to tell caller that the operator(s) are still busy, the call will be disconnected, please call back later.
13	DISA: Lunch break greeting message (on answer).
14	Morning Call -- Wake up Message.
15	Call Waiting Message.(Refer to programming mode 05-04-08.)
16	* Reserved for future use.
17	* Reserved for future use.
18	Company Greeting message instead of Music On Hold.

During DISA operation if there is no VSC channel allocated to DISA Night Answer (type 08) then DISA calls will be answered by the DISA Day message in both Day and Night mode.

RECORDING VOICE MESSAGES

VOICE MESSAGES MUST BE RECORDED FROM A MASTER CONSOLE ONLY.

There is a channel available in the G1-824 and this is accessed by dialling 86 from the console. Each channel can be divided into 1 to 8 segments depending on requirements.

```
VOICE PORT (1)   (1)
0=REC 7=PLAY
```

Dial 0 and after the tone has stopped, record the company greeting message,

```
VOICE PORT (1)
RECORDING.............
```

When completed Dial 1 and the screen display will be,

```
VOICE PORT (1)   (2)
0=REC 7=PLAY
```

The 2 in brackets indicate that the second message segment is ready to record. Dial 0 and record the message to apologize for the continuing delay,

```
VOICE PORT (1)
RECORDING.............
```

When the message is recorded dial 1. Continue using the same procedure until all the required segments are recorded and then hang up.

Program 20-nn- : Set Day – Time / Lunch Time Schedule

| 20-nn Day Time
00 00 00 00 00 | nn = Day schedule pointer (00-06)
Setting data |

General:

This program assigns daytime from Sunday to Saturday for automatic night switching and sets lunchtime to allow the VSU to play a different message for this period.

Description:

The system is capable of switching automatically between day / lunch break / night settings using the time parameters set in this Mode. To change from manual to automatic night switching the console presses **[PRG] /[TRF/FL]** / *. Pressing * toggles between the 2 modes.
If a Function key has been set to function 52 then pressing this key will change from Day to night mode by one touch but will not change between Automatic and Manual switching.

> 00 = Sunday
> 01 = Monday
> 02 = Tuesday
> 03 = Wednesday
> 04 = Thursday
> 05 = Friday
> 06 = Saturday

Example

| 20-01 Day Time
08 30 17 00 12 |

| 20-01 Day Time
30 13 30 |

On Monday the system will switch from Night time to Daytime start at 8:30 in the morning, will switch to lunchtime start at 12:30, switch back to daytime at 13:30 and switch to Night time at 17:00. To program no lunchtime leave the entries for items 03 and 04 on 00.

Program 25 : Reset Data to System Default

```
25 - Reset Data
0 - 9 Default
```

General:

This program resets all data to System Default. All new systems must be reset to default before any programming in case corruption has been caused during handling or shipping. It will also be necessary to reset to default after a software upgrade is installed. When using item 3 or 4 these must be done AFTER the system reset is performed.

Description:

1 = System data will be reset to system default except System Speed Dial Programming.

2 = The system data will be totally reset to system default.

WARNING: All user-defined data will be lost.

3 = For all Stations set
   44-st-02=1 (Hold Feature restricted)
   44-st-03=1 (Call Split Feature restricted)

This feature is for Hotel/Motel operation. After setting this Mode it is necessary to reprogram the Console and any Administration phones in Mode 44-st-02 to allow them to place calls on hold.

4 = For all stations set
   40-st-01=0 (Barge In not allowed)
   40-st-02=0 (Monitor not allowed)

It is strongly recommended that this parameter is used on ALL systems to prevent accidental Barge In operations being misinterpreted as cross talk.

All other system programming information remains unchanged when using 3 or 4.

8 = Reset VMU CF card to default. This must be done for first time installation of the VMU.

Program 29-tk-IP : Trunk Specifications – 2

29-tk-IP TK SPEC	tk = 01-10, IP = 01-08
0 0 0 0 0 0 0 0	System Default

Item Pointer	Display Data	Programming Data Description	Default
--------	----------	--	-------------
01	0-1	CO Line Loop Resistance Audio boost	0=0 Km.
02	0-8	ACD-1 Function Enable	0=Disable
03	0~9	ISDN Incoming Call Type	0= InBlock
04	0-8	Set Ring Frequency (DK Handsets)	0=H/set Setting
05	0-9	Allow Audible Ring for Incoming Calls	0=All Stations
06	0-1	USA 1A2 Emulation feature	0=Disable
07	0-9	CO Delayed Ring Timer to Hunting Group	0=Disable
08	0-9	CO Delayed Ring Overflow Hunting Group	0=The 1st Hunting Group

General:

This program permits each trunk line to be assigned different parameters.

Description:

01. CO Line Loop Resistance Audio Boost:

This parameter can adjust the system's analogue TKU interface to adapt to different CO loop resistance. For long lines where the audio may be low this parameter will allow the levels to be boosted on both Send and Receive loudness.

    0 = 0 Km (default),   1 = 3 Km,   2 = 5 Km

02. ACD-1 Function Enable:

This parameter enables or disables the ACD-1 function for each trunk individually and is able to select whether ACD-1 operates in Day or Night or Both Modes.

    0 = Day Time - Disable ACD function,   Night Time - Disable ACD function
    1 = Day Time - Disable ACD function,   Night Time - Enable ACD function[1]
    2 = Day Time - Disable ACD function,   Night Time - Enable ACD function[2]
    3 = Day Time - Enable ACD function[1],   Night Time - Disable ACD function
    4 = Day Time - Enable ACD function[1],   Night Time - Enable ACD function[1]
    5 = Day Time - Enable ACD function[1],   Night Time - Enable ACD function[2]
    6 = Day Time - Enable ACD function[2],   Night Time - Disable ACD function
    7 = Day Time - Enable ACD function[2],   Night Time - Enable ACD function[1]
    8 = Day Time - Enable ACD function[2],   Night Time - Enable ACD function[2]
    9 = Reserved for future use.

    *1: Enable ACD-1 function only when all ring assigned stations are busy.
    *2: Enable ACD-1 function when time in mode 05-09-06 has elapsed even if ring assigned stations are idle.

03. ISDN Incoming Call Type

    This feature allows the user to set ISDN line to fit different incoming call types.

0= InBlock Sending. The ISDN Central Office will send "Extension Called Party Number" or "Extension Sub-address Number" during the Setup procedure.

1= Overlap Sending. The ISDN Central Office does not send "Extension Called Party Number" or "Extension Sub-address Number" during the Setup procedure. After the Setup procedure has been established, this information will be sent by Central Office.

2~9= MSN. System rings the extensions assigned in Program 01/Program 02 when there is an incoming ISDN call.

04. Set Ring Frequency (DK handsets):

This feature allows each trunk to ring at DK handsets with its own individual ring frequency and override the frequency set by the user for all calls.

> 0 = As per the key phone's ring setting.
> 1~8 = Use the ringing frequency 1~8 of key phone as the trunk's ring.

05. Allow Audible Ring for Incoming Calls:

This feature allows either some or all stations which are ring assigned in Mode 01 or 02 to receive the audible ring signal when a trunk rings at the station. If the audible signal is disabled the station will still be able to answer a call by lifting the handset only, if they are ring assigned in Mode 01 or 02

> 0 = All stations assigned in Mode 01 & 02 will receive audible signal for an incoming call
> 1 = Only the first station assigned in Mode 01 & 02 will receive audible signal for an incoming call. The other ring assigned stations will still be able to answer a call by lifting the handset only
> 2 = The first 2 stations assigned in Mode 01 & 02 will receive audible signal for an incoming call. The other ring assigned stations will still be able to answer a call by lifting the handset only
> 3 to 8............
> 9 = The first 9 stations assigned in Mode 01 & 02 will receive audible signal for an incoming call. The other ring assigned stations will still be able to answer a call by lifting the handset only.

06. USA 1A2 Emulation:

 Not Applicable

07. CO Delayed Ring Timer to Hunting Group:

This parameter sets the delayed ring time for an incoming call to the hunting group. If the stations in the Ringing Line Preference Assignment (mode 01/02) do not answer the incoming call within below timing, the call will overflow to the pre-assigned hunting group (mode 29-TK-08).

> 0 = Disable this feature
> 1 = 8 sec.   2 = 16 sec.   3 = 24 sec.   4 = 32 sec.   5 = 40 sec.
> 6 = 48 sec.   7 = 56 sec.   8 = 64 sec.   9 = 72 sec.

Related System Programming Mode: 29-Tk-07, 29-Tk-08, 67, 68, 69

08. CO Delayed Ring Overflow Hunting Group:

This parameter sets the pre-assigned overflow Hunting Group for an incoming call. If the stations in the Ringing Line Preference Assignment (mode 01/02) do not answer the incoming call within the pre-assigned timing (mode 29-TK-07), the call will overflow to the pre-assigned hunting group.

> 0 = Overflow to Hunting Group 1
> 1 = Overflow to Hunting Group 2
> 2 = Overflow to Hunting Group 3
> ……
> 8 = Overflow to Hunting Group 9
> 9 = Overflow to Hunting Group 10

Related System Programming Mode: 29-Tk-07, 29-Tk-08, 67, 68, 69

Program 35-tk-IP : Trunk Specifications – 1

35-tk-IP TK SPEC	tk = 01-10, IP = 01-08
0 1 0 0 3 0 0 0	System Default

Item Pointer	Display Data	Programming Data Description	Default
01	0-1	Trunk Type	0=CO
02	0-1	Dialling Signal	1=DTMF
03	0-8	External Call Forward	0=No
04	0-8	DISA	0=No
05	0-3	Pick Up	3=Yes
06	0-9	Loud Bell	0=No
07	0-5	Inward Line Ringing Type - Day	0=Com
08	0-5	Inward Line Ringing Type - Night	0=Com

General:

This program permits every trunk line to be assigned different parameters.

Description:

01. Trunk Type:

    0 = CO.   = Trunk line is Central Office line.
    1 = PABX. = Trunk line is installed behind a PABX or Centrex.

02. Trunk Signal:

    0 = Pulse   = Trunk dialling signal is Dial Pulse.
    1 = DTMF = Trunk dialling signal is DTMF (Touch-Tone).

03. External Call Forward - ECF:

    0 = No ECF.
    1 = ECF to system speed dial 101
    2 = ECF to system speed dial 102
    3 = ECF to system speed dial 103
    4 = ECF to system speed dial 104
    5 = ECF to system speed dial 105
    6 = ECF to system speed dial 106
    7 = ECF to system speed dial 107
    8 = ECF to system speed dial 108

04. DISA/ECF (Direct Inward System Access/External Call Forward):

0 = Day - Disable	Night - Disable
1 = Day - Disable	Night - DISA Enable
2 = Day - DISA Enable	Night - Disable
3 = Day - DISA Enable	Night - DISA Enable
4 = Day - Disable	Night - ECF Enable
5 = Day - ECF Enable	Night - Disable
6 = Day - ECF Enable	Night - ECF Enable
7 = Day - DISA Enable	Night - ECF Enable
8 = Day - ECF Enable	Night - DISA Enable

* Enable = Listed feature is operational. This feature needs G1-VSC or G1-SLC-8 installed.

05. Pick Up:

0 = Day - can not   Night - can not
1 = Day - can not   Night - can
2 = Day - can   Night - can not
3 = Day - can   Night - can

Can = An incoming call on this line can be answered by non-ringing stations.
Can not = An incoming call on this line can not be answered by non-ringing stations.
This feature is to assign "Private Lines" in conjunction with the programming of dial 9 groups, or to prevent incoming calls being answered by users other than the ring assigned stations.

06. Loud Bell:

Refer to Program 06 to assign Relay to operate for a Loud Bell.
0 = No Operation.
1 = RELAY on the MSC (R) will be activated when the trunk is ringing.

The system does not provide any voltage from the assigned relay. A separate ring voltage and ring device will need to be provided by the installer

07. Inward Line Ringing Method Assignment (Day):

As described in Program 01-tk-IP, there are four ringing methods plus a Private line setting:

COMMON AUDIBLE
Ring all assigned Extensions simultaneously.

LINEAR
Each incoming call rings the first available Extension in order of the Extensions assigned in **Program 01-tk.**

CIRCULAR
The first incoming call on each trunk rings the first assigned Extension, the 2nd incoming call rings the next station, etc.

HUNT
If an incoming line rings an extension which is busy or does not answer, after the assigned Hunt Time (Program **05-08-01**,) the call will ring the next available extension assigned in the same group. If the next ringing station is busy then the call will immediately move to the next ring assigned extension but if the station does not answer then the call will wait for the Hunt time and then ring the next assigned extension. Once the ring assignment has passed a station which is busy then it will provide Off Hook Busy Remind signal and when the station is free if the call is still unanswered the station will commence ringing for that call. Stations which do not answer a call will also continue to ring until the call is answered.

PRIVATE
This is for an incoming private line. The station that owns this private line can set call forward (All, Busy, No Answer) for this private line to the Voice Mail Port (See Program **43- ST-02**).

0 = Day - COMMON AUDIBLE   1 = Day - LINEAR   2 = Day - CIRCULAR
3 = Day - HUNT   4 = Day – PRIVATE

08. Inward Line Ringing Method Assignment (Night):

As described in Program 02-tk-IP, there are four ringing methods plus a Private line setting: All settings in item 08 are the same as item 07.

0 = Night - COMMON AUDIBLE	1 = Night - LINEAR	2 = Night - CIRCULAR
3 = Night - HUNT	4 = Night - PRIVATE	

To set an trunk name -
1. Enter system programming Mode 35.
2. Depress **{Change}** to enter the Name mode.
3. Input the name for the related extension by the following function keys.

Key Pad	Depress 1 time	Depress 2 times	Depress 3 times	Depress 4 Times	Depress 5 Times
1	,	.	:	1	Space
2	A	B	C	2	;
3	D	E	F	3	/
4	G	H	I	4	_
5	J	K	L	5	-
6	M	N	O	6	'
7	P	Q	R	S	7
8	T	U	V	8	+
9	W	X	Y	Z	9
0	ä	ü	ñ	ö	0
*	%	^	&	*	(
#	$	!	@	#	)

4. Press **{SAVE}** to store the data.
5. The next trunk port will appear ready to program names.

Program 36-gp-tk : Trunk Group Assignments

36-gp-IP TK GRP 01 02 03 04 05	gp = 01-08, IP = 01-10 trunks to be included

General:

This program permits each trunk line to be assigned to different Trunk groups. There are eight groups in total.

Description:

In the bottom data-setting area, the trunk number (01-10) means that the trunk is included in the specified group. Press **[REDIAL]** to clear all entries from the table before entering the required trunks. Always set outgoing calls to start from the highest fitted trunk and program in descending order to the lowest trunk fitted. This will prevent call collision particularly in systems with SLT'S using PSTN trunks. An additional 8 groups are available by utilising the groups available in Mode 38 for the dial 87 trunk groups. If a station is allocated no dial 9/0 group in Mode 41-st-04 but is then allocated a Dial 87 group in mode 46-st-01 then this station will u8se that group as its dial 9/0 group giving a total of 16 groups available.

There are 10 trunks maximum in a trunk group.

This parameter will work with the following features:

  . Dial 9 or 0 access to trunk group.
  . Tenant service.

Related System Programming Mode: 36, 38, 41-ST-04, 46-ST-01

Program 37-tk : Busy Out Trunks

```
37-tk Busy Out
0000000000
```

tk = 01-10
Busy out Type

General:

This program permits the trunk line to be locked by a Technician.

Description:

This feature is used when the user does not want to use the trunk or to remove a problem line. When the trunk is set to BUSY OUT, the LCD display on the phone will display " Access denied " when that line button is pressed.

> 0 = Line is unlocked
> 1 = Busy for Outgoing calls
> 2 = Busy for Incoming and Outgoing calls (set loop on)
> 3 = Busy for Incoming and Outgoing calls (set line LED on)

Program 38-gp-tk : Dial 87 Trunk Group Assignments

38-gp-IP TK GRP
01 02 03 04 05

gp = 01-08, IP = 01-10
trunks to be included

General:

This program permits each trunk line to be assigned to different Trunk groups which can be accessed by dialling [87]. There are 8 groups in total. This group will be available to a station in addition to or instead of it's dial 9 group. Always set outgoing calls to start from the highest fitted trunk and program in descending order to the lowest trunk fitted. This will prevent call collision particularly in systems with SLT'S. Press **[REDIAL]** to clear all entries in the table before entering required trunks.

Description:

This program is different from Program Mode 36-gp-tk. This program is used for dialling [87] or [9] to access a Trunk Line.

Once a dial [87] group has been programmed it will need to be assigned to the stations that are to use it in Mode 46-Stn-01.

Related System Programming Mode: 36, 38, 41-ST-04, 46-ST-01

I

Program 39-IP : Sensor Assignments

```
39-ST-IP Sensor
FN SS
```

```
39-ST-IP Sensor
FN SS FN SS FN S
```

| | | Display | Programming Data |
ST	IP	Data	Description
00(00)	01	00-18	SENSOR #1 on G2-MSU Card
	02	00-06	SENSOR #1 Contact Type and Activating Time
ACP Ext. no	01	00-18	SENSOR #1 on ACP or ACP05 or RSU
	02	00-06	SENSOR #1 Contact Type and Activating Time
ACP Ext. no	03	00-18	SENSOR #2 on ACP05 or RSU
	04	00-06	SENSOR #2 Contact Type and Activating Time
ACP Ext. no	05	00-18	SENSOR #3 on ACP05 or RSU
	06	00-06	SENSOR #3 Contact Type and Activating Time
ACP Ext. no	07	00-18	SENSOR #4 on ACP05
	08	00-06	SENSOR #4 Contact Type and Activating Time
ACP Ext. no	09	00-18	SENSOR #5 on ACP05
	10	00-06	SENSOR #5 Contact Type and Activating Time

Description:

The G2-MSU and ACP provides 1 Sensor individually. RSU offers 3 and ACP05 offers 5 sensors.

FN= Function No.   SS=Sensor Type

Each Sensor can be assigned one of the following 18 functions in items 39-ST in the GDS-600.

Set data	*Function*
00	No Operation
01	Fire Alarm
02	Break Alarm
03	Door Phone 1 (88)
04	Reserved for future use
:	:
18	Reserved for future use

The SENSOR type may be normally open or normally closed and can be set to be activated in Day or Night switching or in both. Parameters 39-02 in the GDS-600 set each sensor contact to be a normally open or normally closed type and set whether to work in Day or Night Mode or both.

00 = Disable Sensor function   01 = Normally Open, Activated for Daytime.
02 = Normally Closed, Activated for Daytime.   03 = Normally Open, Activated for Nighttime.
04 = Normally Closed, Activated for Nighttime.   05 = Normally Open, Activated for Day and Nighttime.
06 = Normally Closed, Activated for Day and Nighttime.

The applications are as the following:
    1 = Fire Alarm: Sensor detects fire, all idle extensions will be rung and all busy extensions will
       Hear the alarm tone. The fire alarm will continue for 10 minutes.
       Pressing **[7][7][7]** from the console will stop the fire alarm.
        The LCD display will show FIRE ALARM !!!! when the alarm is activated.

    2 = Break Alarm
        .The Sensor detects the signal appears, all idle extensions will be rung.

.The Sensor detects the signal disappears, all extensions will stop ringing.
The LCD display will show BREAK ALARM !!!! when the alarm is activated.

Individual stations can be programmed to not receive the Break Alarm in Mode 45-st-06.
The ring cadence for the fire alarm will be as follows

```
    A       B    c    b       A       b    C    b      a        b
 _____      __      _____        ___      __      _____      __
        |____|  |____|     |_____|   |____|  |____|     |____|  |____
```

a = 1.25 seconds On   b = 0.25 seconds off   c = 0.25 seconds on.

If door key has been set in mode 07 and mode 39, the Door key on DSS will get the following indications:

LED Indication	Door Phone Status
Off	Normal Close for Sensor
Red-Slow Flashing	Normal Open for Sensor
Red-Fast Flashing	Door Phone Is Calling
Green on	This Station is talking to Door Phone
Red on	Some other Station is talking to Door Phone

Program 40-st-IP : Station Class of Service – 1

40-st-IP STCOS	st = Extension NO.(2-4 digits). IP = 01-08
1 1 0 0 0 0 0 00	System Default

Item Pointer	Display Data	Programming Data Description	Default
01	0-9	Override Level	1=Low
02	0-9	Monitor Level	1=Low
03	0-9	Limit Call Duration	0=No
04	0-3	Station Loud Bell	0=No
05	0-1	Access Paging	0=Yes
06	0-1	Receive Paging	0=Yes
07	0-1	Security Code Status	0=None
08	00-48	Forced Account Code	00=All

General:

This programming Mode permits each station to be assigned a different Class of Service.

Description:

01. Override Level:

Higher level stations can override lower level stations, equal levels may override each other.

>   0 = Disable   1 = Lowest level   9 = Highest level

>   d = Allow to rob other used trunk for an Emergency Call (U01Gx version only)
>   When the extension (40-ST-01=d) tries to access a trunk and all "Dial 9" trunks are busy, then the
>   system will search and drop the busy trunk used by the extension with the lowest override level (< 9)
>   in mode 40-ST-01. Then the system will allow this extension (40-ST-01=d) to use the trunk for an
>   emergency call. System will not access busy trunks with the highest override level extension (40-
>   ST-01=9 or "d").

02. Monitor Level:

Higher level stations can monitor lower level stations, equal levels can not monitor each other.

>   0 = Disable   1 = Lowest level   9 = Highest level

03: Limit call duration:

Conversation will be interrupted by a Busy Tone. A warning tone will be given 10 seconds before the end of the timed duration. (see Mode 05-04-03 to set call limiting action)

>   0 = No limit   1 = 3 min.   2 = 5 min.   3 = 10 min.   4 = 15 min.   5 = 20 min.
>   6 = 30 min.   7 = 40 min.   8 = 50 min.   9 = 60 min.

Related System Programming Mode: 05-04-03, 40-st-03

04. Station Loud Bell:

Refer to Program 06 to assign Relay to operate for a Loud Bell.

      0 = No operation

      1 = Operate relay on the MSC card when calls are received on this station.

The system does not provide any voltage from the assigned relay. A separate ring voltage and ring device will need to be provided by the installer.

05. Access Paging:

      0 = The "All Page" signal can be broadcast by this station.

      1 = The "All Page" signal can not be broadcast by this station.

06. Be Paged:

      0 = The "All Page" signal can be received by this station.

      1 = The "All Page" signal can not be received by this station.

This feature is useful for someone who should not be disturbed by paging calls.

07. Security code status:

      0 = The station is unlocked. (Can make outgoing calls.)

      1 = The station is locked. (Can not make outgoing calls.)

If a phone becomes locked accidentally or the user forgets their lock code, this parameter will unlock the phone. There is no way of finding what the lock code was.

08. Forced account code:

There are 48 forced account codes which can be used on the system. Each user can be allocated use of one or all of these. If a station has a Forced Account Code 01-48, the user can key **[PRG][4]** and the force account code to override toll restrictions for one call only.

If the setting is from 01-48 then this Account Code ONLY can be used by the station. If the setting is 00 then the station can use any one or all Account Codes.

Refer to Mode 17: Create Forced Account Code

Program 41-st-IP : Station Specifications

| 41-st-IP STSPE | st = Extension NO.(2-4 digits). IP = 01-07 |
| 1 1 0 1 0 0 CN | System Default |

Item Pointer	Display Data	Programming Data Description	Default
01	1-8	Station Group / Agent Group for ACD	1=1
02	1-8	Key Group For Keyphone	2=2
03	1-8	Shift Key Group For Keyphone / SLT Port as MOH Source	0=None
04	1-8	Dial 9 trunk group	1=1
05	0-9	Toll plan - Day	0=0
06	0-9	Toll plan - Night	0=0
07	cn	c = Card number, n = Port number	

General:

This program permits each station to be assigned to a different Class of Service.

Description:

01. Station group:

This parameter will work with the following features:

- Call Pickup Group.
- Single Digit Intercom Group
- Paging Group

02. Flexible key pattern group assignments (key phone):

This parameter assigns stations to one of 8 flexible key pattern groups.

    0 = Disable   1-8 = Soft Key Plan 1 to 8

See Mode 07: Flexible key group assignment to write soft key plans.

03. Shift Key Group for Keyphone / SLT Port as MOH Source:

Each station can have access to a second soft key group accessed by the **[SHIFT]** key (refer to mode 07). The shift key must be programmed in the first group assigned to the station. When the shift key is used to access the second group then it will light red and override the function assigned to it in the second group.

    0 = Disable   1-8 = Soft Key Plan 1 to 8

See Mode 07: Flexible key group assignment to write soft key plans.

If the Extension is an SLT port it can be used as an additional MOH input allowing individual tenants to each have their own Message on Hold. The port is set to type 7 in Mode 43-port-02 then in Mode 41-slt-03 user can allocate which trunk group will use this port as MOH source.

    0 = All Trunk groups   1-8 = Trunk group 1 to 8

04. Dial 9 trunk group:

When a station selects a trunk line by dialling 9, the system finds an available trunk according to the dial 9 group assignment. If a trunk is not in a stations assigned dial 9 group then the station will not be able to make outgoing calls on that trunk.

>   0= use "Dial [87] trunk group" as "Dial 9 trunk group". (see mode 46-ST-01).
>   That is, Dial 9 can access the "Dial [87] trunk group". Using this setting can extend Dial 9 trunk
>   groups from 8 to 16.
>   1= search in the 1st tk group   2 = in 2nd tk group   ……..   8= in 8th tk group

Related System Programming Mode: 36, 38, 41-ST-04, 46-ST-01

05. Toll plan - Day:

This parameter assigns the toll plan to be used by the station in day mode.

Refer to Mode 18 for Toll plan details.

06. Toll plan - Night:

This parameter assigns the toll plan to be used by the station in night mode.

Refer to Mode 18 for Toll plan details.

07. Port number:

This is for checking only, the system will automatically show the correct port number. It is not possible for the user to change or remove this parameter.

In the G1-824, the port number consists of 2 digits
11~18: station ports on the G1-MBU
21~28: station ports on the 1st G1-STC card.
31~38: station ports on the 2nd G1-STC or G1-SLC card.
41~48: Internal ISDN ports on the 1st S/T port of G1-SIU card.
51~58: Internal ISDN ports on the 2nd S/T port of G1-SIU card.
61~68: Internal ISDN ports on the 3rd S/T port of G1-SIU card.

In the G2-1624, the port number consists of 2 digits
11~18: station ports on the 1st Stc card
21~28: station ports on the 2nd STC or SLC card.
31~38: station ports on the 3rd STC or SLC card.
41~48: station ports on the 4th STC or SLC card.
51~58: station ports on the 5th STC or SLC card.
61~68: station ports on the 6th SLC card.

71~78: Internal ISDN ports on the 3rd S/T port of G1-SIU card.

Program 42-st-IP : Register Memory Block for Individual Speed Dial

| 42-st-IP SPD-T |
| b1 b2 |

st = Station No. (2-4 digits) IP = 01-02
blocks (2 max.) for a Station

b1:   Block 1 of Individual Speed Dial Codes (00-09 or DSS11~DSS20)
b2:   Block 2 of Individual Speed Dial Codes (DSS1-10)

General:

This program divides sets of **Individual Speed Dial** into blocks for use by Stations.

Description:

- If in program **05-04-06,** the Individual Speed Dial Codes are assigned:
    500 sets**,** the maximum blocks in this program are **50** blocks.
    400 sets, the maximum blocks in this program are **40** blocks.
    300 sets**,** the maximum blocks in this program are **30** blocks.
- Each block has 10 sets of Individual Speed Dial.
- Each set has up to 30 digits.
- Speed Dial Codes 00~09 shares the same memory block with DSS11~DSS20.
- Each Station can use up to 2 blocks (20 sets of Individual Speed Dial.)

Example:

| 42-**13**-IP SPD-T |
| **01 02** |

13: Station No. (2-4 digits)
01 02: Station 553 can use block **01** and **02** for Individual
Speed Dial (20 sets)

| 42-**15**-IP SPD-T |
| **04 00** |

15: Station No. (2-4 digits)
04 00: Station 105 can use block **04** (10 sets) for Individual
Speed Dial (00-09 or DSS11~20), **00** : for no block.

| 42-18-IP SPD-T |
| **00 03** |

18: Station No. (2-4 digits)
00 03: Station 550 can use block **03** for Individual Speed Dial
(DSS 1-10)

*   Refer to **Keyphone Operation**, **G.04** for the programming of Individual Speed Dial.
*   Be sure to program these parameters before programming speed dial on key phones.

If problems are encountered with stations not being able to program speed dial numbers, check this parameter
to be sure that speed dial locations are available to the station. If the station card was fitted at the time of
system initialisation then the blocks will have been allocated automatically.

Program 43-cn-IP : Port Specifications

43-cn-IP Port st 0 1 2 00 00	cn = Port No. (2 digits) IP = 01-06 Parameters for the port

cn = Position Number on Card (11-68)

In the G1-824, the port number consists of 2 digits

11~18: station port on G1-MBU   21~28: station port on the 1st G1-STC card.
31~38: station port on the 2nd G1-STC or G1-SLC card. 41~48: Internal ISDN port 1st S/T port of G1-SIU card.
51~58: Internal ISDN port 2nd S/T port of G1-SIU card. 61~68: Internal ISDN port 3rd S/T port of G1-SIU card.
In the G2-1624, the port number consists of 2 digits

11~18: station ports on the 1st Stc card   21~28: station ports on the 2nd STC or SLC card.
31~38: station ports on the 3rd STC or SLC card.   41~48: station ports on the 4th STC or SLC card.
51~58: station ports on the 5th STC or SLC card.   61~68: station ports on the 6th SLC card.
71~72: Internal ISDN ports on the 3rd S/T port of G1-SIU card.

Item Pointer	Display Data	Programming Data Description	Default
01	nnnn	Station Number (2 to 4 digits)	System
02	0-9	Equipment Type	System
03	1-	Reserved	1=
04	0-8	Disallow SLT Connection	0=Yes
05	00-50	Voice Mail Box Capacity	00= disabled
06	00-90	Maximum Voice Mail Message Length	00=No limitat

General:

This program permits each port to be assigned different parameters and station numbers.

Description:

01. Station number:

Use this setting to assign station numbers for the Flexible Numbering Plan. The allowed number range is 10-69, 100-699. 1000-6999. If it is necessary to0 use digits 7 or 8 as part of the station numbering scheme then Mode 05-08-05 must first be set to 8 to prevent confusion between control codes/programming digits and Station numbers.

02. Equipment type:

0 = None connected	1 = Digital Phone without LCD
2 = Digital Phone with LCD	3 = Hybrid function for DK1-21H
4 = Single Line Telephone	5 = Reserved
6 = Reserved	7 = SLT Port used as MOH input.
8 = Voice Mail Port	9 = ISDN Device
D = Door phone/ACP	

Types 0 to 5 are recognized by the system automatically.

Type 7 allows an SLT port to be used as an additional MOH input allowing tenanted systems to have different messages played to different trunk groups during Call Hold. Once an SLT port is set to MOH then in Mode 41-slt-03 the port can be allocated to all or individual trunks groups as a hold source.

Type 8 can be assigned to an analogue port to enable the system to send DTMF tones identifying a call forwarded calls originating station. A voice Mail port will receive DTMF tones from call forwarded stations identifying the mail box to which the call is intended. The mail box number must be the same as the station number for this parameter to work although Mode 05-10 can insert leading digits before the station number is sent to the Voice Mail and is also able to insert pauses before or during the string. There is also an Enhanced Protocol to provide more information to the Voice Mail unit, see Mode 05-10 for descriptions of the protocols available.

03. Flexible key pattern group assignments (DSS console):

This parameter assigns stations to one of 2 flexible DSS console key pattern groups.

0 = Disable   1-2 = Soft Key Plan 1 to 2

See Mode 08: Flexible DSS console key group assignment to write soft key plans.

04. Disallow SLT Connection:

This parameter when enabled will prevent an SLT from being used on a Hybrid port.

0 = Disabled   1 = Enabled

For Type 3 telephone (DK1-21H), enabling this function will automatically assign the "Call Forward no Answer" on the DK1-21H to its appended Single Line Telephone when the DK1-21H is connected to the system. This function is for users to utilise the DK1-21H's SLT as an answer machine or a secondary telephone (like a cordless telephone for mobility). The master telephone (DK1-21H) can also pick up the call of the secondary phone (SLT).

05. Voice Mail Box Capacity (G2-VMU):
This parameter decides the total mail box message units can be used for this extension.
00 = No Voice Mail Box   01 = 5 units (total 150 sec.)   02 = 10 units (total 300 sec.)
03 = 15 units (total 450 sec.)   ……………………   50 = 250 units (total 7500 sec.)

Each unit has 30 seconds storage.

VMU Type	32M	64M	128M	256M	512M
Total Units for all VM boxes	189 Units	530 Units	1230 Units	2536 Units	5309 Units

The total units may be reduced if more features are added for G2-VMU in the future.

Example 2,

```
43-18-06 Port
118 2 1 0 08 02
```

Means: The total mail box capacity for extension 118 is 1200 sec (40 units, 20 min.) and the maximum length for each voice mail message is 60 sec.(2 units). The Voice Mail Messages for this extension could be varied from 20~40.

To set an extension name -

1. Enter system programming Mode 43.
2. Depress **{Change}** to enter the Name mode.
3. Input the name for the related extension by the following function keys.

Key Pad	Depress 1 time	Depress 2 times	Depress 3 times	Depress 4 Times
1	Q	Z	Space	1
2	A	B	C	2
3	D	E	F	3
4	G	H	I	4
5	J	K	L	5
6	M	N	O	6
7	P	R	S	7
8	T	U	V	8
9	X	Y	Z	9
0	.	:	&	0
*	-	/	!	*
#	(	)	$	#
DSS23	Cursor Left			
DSS24	Cursor Right			

4. Press **{SAVE}** to store the data.
5. The next extension port will appear ready to program names.

Program 44-st-IP : Station Class of Service – 2

| 44-st-IP STCOS | st = Station No. (2-4 digits) IP = 01-08 |
| 0 0 0 0 0 0 0 0 | System Default |

Item Pointer	Display Data	Programming Data Description	Default
01	0-1	System Alarm	0=Enable
02	0-1	Hold feature	0=Enable
03	0-1	Call Split	0=Enable
04	0-1	Manual Line	0=Disable
05	0-1	Headset feature	0=Disable
06	0-1	Use Engineering Password	0=Enable
07	0-1	DTMF Receiver Control for Voice mail Ports	0=Normal Timeout.
08	0-1	Station Alarm Signal Type	0=Music

General:

This program permits each station to be assigned to a different Class of Service.

Description:

01. System Alarm:

If the setting is disable, the station will not receive system alarm clock signals.

    0 = The "System Alarm" signal will be received on this station.
    1 = The "System Alarm" signal will not be received on this station.

02. Hold feature:

If the setting is disable, the station will not be able to place calls on hold.

    0 = Hold function allowed
    1 = Hold function not allowed

03. Call Split:

If the setting is disable, the station will not be able to activate call splitting function. When activated and the station presses hook flash after placing a call on hold the call will not be retrieved. Dialling 9 (or 0) or 72 will retrieve the held call.

    0 = Call Splitting function allowed
    1 = Call Splitting function not allowed

Related System Programming Mode: 07(code 26), 44-st-03

~~04. Manual Line:~~

~~If the setting is Enable, lifting the handset of the station will call the operator(s) directly without dialling any digits.~~

~~0 = Disable   1 = Enable~~

05. Headset feature:

The user can then use the **[SPK]** key to go on or off hook. The user will overwrite this programming mode if they use **[SPK 775]** to switch between handset and headset mode.

0 = Disable   1 = Enable

06. Use Engineering Password:

If the setting is disable the station is unable to use the engineering password to enter programming mode.

0 = Enable   1 = Disable

07. DTMF Receiver Control for Voice mail Ports:

This program controls the operation of DTMF detectors for each Voice mail Port. The parameter is set to free DTMF detectors quickly for systems with high Voice Mail traffic.

0 =   After the Voice Mail dials the extension number, The system releases the DTMF receiver after the timeout of mode 05-02-02.

1 =   After the Voice Mail dials the extension number, The system releases the DTMF receiver immediately.

08. Station Alarm Signal:

This parameter decides what the station will hear when a station alarm or Morning Call is activated.

0 = Back Ground Music   1 = Busy tone

Program 45-st-IP : Station Class of Service – 3

45-st-IP STCOS	st = Station No. (2-4 digits) IP = 01-08
0 0 0 0 0 0 0 0	System Default

Item Pointer	Display Data	Programming Data Description	Default
01	0-1	Intercom Call Limitation	0=Disable
02	0-	Reserved	0=
03	0-1	Ringing Volume Up Gradually	0=Disable
04	0-1	Allow Trunk Access	0=Yes
05	0-1	Intercom Calls To Different Station Groups	0=Yes
06	0-1	Receive Break Alarm	0=Yes
07	0-1	Allow Unrestricted Speed Dial	0=Yes
08	0-1	Record Station's SMDR Data	0=Yes

General:

This program permits each station to be assigned to a different Class of Service.

Description:

01. Intercom Call Limitation:

If this setting is enabled, the station can not make an intercom call by dialling a station number. Under this condition, the Key Phone still can press a Flexible Key to make an intercom call or the Key Station or Analogue phones can call a station using the "Single Digit" feature.

0 = Disable   1 = Enable

02. Reserved

03. Ringing Volume Up Gradually Capability:

Using this function, the key telephone's ringing volume will gradually increase when the Extension is ringing.

0= Disable   1= Enable

04. Allow Trunk Access:

If this function is disabled then the station will be unable to access any trunks for incoming or outgoing calls.

0 = Enable   1 = Disable

05. Intercom Calls to Different Station Groups:

If this function is disabled then stations will not be able to make intercom calls outside their own station group (Mode 41-st-01). This parameter is for use in tenancy arrangements where each company wish's to remain totally separate although some stations can still be allowed this function, for instance a shared Receptionist.

0 = Enable   1 = Disable

06. Receive Break Alarm:

If this parameter is disabled then the station will not receive the Break Alarm signal if one has been programmed in Mode 39.

0 = Enabled   1 = Disable

07. Allow Unrestricted Speed Dial Access:

If this parameter is disabled then the station will not be able to access any of the Speed Dial numbers which have been unrestricted in Mode 05-05-03/04 if they conflict with the stations toll restrictions.

0 = Enabled   1 = Disable

08. Record Station's SMDR Data:

If this parameter is disabled then calls to and from this station will not recorded or output to the SMDR or the Mini Accounting feature. When the Mini Accounting feature is enabled (see Mode 14-01-08) then all stations which are used for administration should have this feature disabled to prevent using memory unnecessarily to record their calls. If calls are allowed to accumulate against stations which are not checked in or out regularly then the system memory buffer will become full and calls will not be recorded.

0 = Record   1 = Do not Record

Program 46-st-IP : Station Class of Service – 4

```
46-st-IP STCOS
0 0 0 3 0 7 2 0
```

st = Station No. (2-4 digits) IP = 01-08
System Default

Item Pointer	Display Data	Programming Data Description	Default
01	0-8	Dial [87] Trunk Group	0= None
02	0-9	Send Message Wait Signal Level	0= Disable
03	0-2	Automatic Answer Capability / Internal CLIP	0= No
04	0-7	DISA/ISDN Indial Recall Capability	3= Recall
05	0-9	Maximum Number Of Transfer Times Allowed	0= No Limit
06	0-7	Door Unlock/DND/CFWD Access	7= Yes
07	0-9	ACP DoorPhone Hunt Grp./Permanent C/FW Grp.	0= 1/Disable
08	0-7	ACP Function Settings/SLT Ring Cadence Settings	0=None/Normal

General:

This program permits each station to be assigned to a different Class of Service.

Description:

01. Dial [87] Trunk Group:

If this setting is from 1 to 8, after the station dials [87] (or dials [9]), the system will automatically search for a free line which is assigned in group 1 to 8 in Program Mode 38.

If the setting is 0, then no dial 87 group is available to this station.

Related System Programming Mode: 36, 38, 41-ST-04, 46-ST-01

02. Message Waiting Level:

The Stations assigned higher levels can leave message for stations with the same or lower levels. Ten levels (0-9) are available (9=highest level, 0=lowest level). The default is now 0 for all stations. Stations which are set to 0 can not send a message wait and can only receive a message wait from Stations which are class 9.

    9 = Can do Message Waiting to Stations assigned level 0-9;
    0 = Can not do Message Waiting (lowest level).

03. Automatic Answer Capability (Keyphone) / Internal CLIP(Caller ID) function:

For Digital Key Telephone:
This parameter if enabled will automatically switch on the microphone of the station if it receives an intercom call. This setting is independent of whether the system is set to voice or ring signalling for intercom calls.

        0 = No   1 = MIC permanently on.   2 = MIC will switch on for Intercom calls

For Single Line Telephone (Connected to G1-SLC1 card):
This enables system to send different internal CLIP(Caller ID) signals to the single line telephone

    0 = Disable CLIP
    1 = Enable to send SDMF(number without name) CLIP to the single line telephone
    2 = Enable to send MDMF(number with name) CLIP to the single line telephone

04. DISA/ISDN Indial Recall Capability:

If this parameter is enabled then when a DISA or ISDN Indial call rings an extension but the station is busy or does not answer (depending on setting) after the voice message announcing the status of the station is heard then the system will recall the operator after the assigned DISA transfer time. Using settings 1 to 3 the called station will continue to ring until the console answers the call. Using Settings 5 to 8 the call will ring the station for 1 cycle (Mode 05-08-06) and then camp on to the console only and cease to ring the called station. If the parameter is set to 0 then the call will stay at the station until answered or terminated.

      0 = No Recall to Operator   1 = Recall to Operator/No Answer
      2 = Recall to Operator/Busy   3 = Recall to Operator/No Answer or Busy
      5 = Recall to Operator/no Answer   6 = Recall to Operator/Busy
      7 = Recall to Operator/No Answer or Busy
      4 = ISDN Indial calls ringing a busy station will receive busy signal.

05. Maximum Re-Transferred Times:

This feature allows the user or the automatic attendant console to re-transfer the same call for the number of times set in this parameter.

      0 = No Limit   1 = Allow 6 times   2 = Allow 7 times
      3 = Allow 8 times ......   8 = Allow 13 times   9 = Allow 14 times

06. Door Unlock/DND/CFWD Access:

	0	1	2	3	4	5	6	7
Door Unlock	Disallow	Allow	Disallow	Allow	Disallow	Allow	Disallow	Allow
DND	Disallow	Disallow	Allow	Allow	Disallow	Disallow	Allow	Allow
CFWD	Disallow	Disallow	Disallow	Disallow	Allow	Allow	Allow	Allow

This parameter allows or disallows the station from accessing the Door Unlock, Do Not Disturb and Call Forward features as per the table.

07. ACP Door Phone Hunt Group/Permanent Call Forward Group:

This parameter allocates the hunt Group that the ACP will call if it is programmed as a DoorPhone and the Call button is pressed.
      0 = Group 1   1 = Group 2   2 = Group 3

If the Extension is not an ACP then this parameter sets the Permanent Call Forward destination Hunt Group for the Station. If the Station user sets a Call Forward manually then it will override this setting but after cancelling the manual Call forward then this setting will be enabled again.

08. ACP Function Settings/ SLT Ring Cadence Settings:

If the Station is an ACP this parameter enables the functions for D/phone or wall phone and for access control and which relay will be operated for door unlock.

	0	1	2	3	4	5	6	7
ACP Function 0 =Door Phone 1 = Wall Mount Keyphone	0	1	0	1	0	1	0	1
Door Lock relay 0 = ACP 1 = G1 MSC	0	0	1	1	0	0	1	1
Access Method 0 = ID Card or P/Word 1 = ID & P/Word	0	0	0	0	1	1	1	1

. If the Station is an SLT then this parameter will set the ring Cadence for calls as follows.

      0 = Normal   1 = Always Trunk ring pattern,   2 = Always Intercom ring pattern

Program 47-st-IP : Hot Line Assignment

```
47-st  HOT LINE
00
```
St = Station No. (2-4 digits)
Data. (Extension Mode)

```
47-st  HOT LINE
SPD:000
```
St= Station No. (2-4 digits)
Data. (SPEED DIAL Mode)

General:

This feature allows a user to lift the handset and directly call a specific outside party through System Speed Dial or an Intercom Extension without dialling any digits.

> * Pressing **[SPK]** on a Keyphone allows the Hot line to be over-ridden.

Description:

1. Enter a System Speed Dial Number for an outgoing call or a Station Number for an Intercom call.

Example:

```
47-15 HOT LINE
SPD:101
```
15 = Station No. (3 digits)
7 Speed Dial 101 (for example: 94150100)

When the user lifts the handset, the System will automatically call 9425010 through System Speed Dial 101.

2. Press **{Change}** to select a hot line Intercom. (Press again 6 back to SPD assignment), the display shows:

```
47-15 HOT LINE
00
```
● Enter an Extension number **18**

```
47-550 HOT LINE
18
```
● The system calls Extension **18** when the handset is lifted.

The Hot Line is the recommended method of connecting a Fax machine to the system. Use a spare analogue port and make the Fax extension a Hot Line to an unused Speed Dial number and allocate the fax line to be used by that Speed Dial. Do not program any number into the Speed Dial. When the fax goes off line it will select the Fax line and then wait for the Fax to dial the number required.

Program 50-st-IP : Station Class of Service – 5

```
50-st-IP STCOS        st = Station No. (2-4 digits) IP = 01-08
0 0 0 0 0 0 0 0       System Default
```

Item Pointer	Display Data	Programming Data Description	Default
01	0-	ACP Warning Signals	0=Disable
02	0-	....	0=
03	0-1	ISDN Incoming Call Display type	0=CLI
04	0-1	CTI-Extension Status Report	0=Disable
05	0-1	VMS Leading Digits for Intercom Calls	0=Enable
06	0-	ACP Door Unlock Relay	0=ACP Relay
07	0-1	ACP Door Open Control	0=Card or P/Word
08	0-1	ACP Phone Operation Type	0=Door Phone

General:

This program permits each station to be assigned to a different Class of Service.

Description:

01. ACP Warning Signals:

This Parameter enables the warning signals for the ACP/RFID unit. The warning signals are Case Open Alarm and Unplug Alarm.

          0 = Disable   1 = Enable

02. Reserved:

03. ISDN Incoming Call Display Type:

This parameter selects what will be displayed on the screen of an LCD phone when an incoming call is received, either the CLI number or the ISDN Indial number. CLI on PSTN lines requires optional equipment to be fitted. This will also select what will be displayed on the SMDR output for incoming calls. This setting also allows the naming of Indials or CLI numbers using System Speed Dial Name / numbers. If this setting is a 1 then when an incoming call with CLI or an Indial number rings the G1-824 will search the System Speed dials and if this number is entered then the name associated with it will be displayed on the screen. Because ISDN CLI currently omits the 0 on CLI It will be necessary to set Mode 84 – Home Area code to correct the settings before searching. The Indial number is entered as the standard 7/8digit number without area code.

          0 = CLI / Name   1 = ISDN Indial Number / Name

04. CTI-Extension Status Report:

Enabling this parameter will output the extensions status report for CTI applications.

          0 = Disable   1 = Enable

05. VMS Leading Digits For Intercom Calls:

Enabling (disabling) this parameter allows the system to send (not send) the leading digit information of the extension when calling to the voice mail. This allows the operator to transfer someone's call directly to the selected Voice mail box.

               0 = Enable   1 = Disable

Related System Programming Mode: 05-12-05, 50-ST-05

06. . ACP Door Unlock Relay:
This parameter can select KSU relay or ACP relay as its Door unlock relay.

      0= Use ACP relay.   1= Use G2-MSU Relay (mode 06-00 needs to be assign to '2' too.)

Related System Programming Mode: 05-12-04, 06

07. ACP Door Open Control

This parameter sets what action is required to open the door lock from an ACP / RFID phone.

      0 = RF Proximity card OR Password   1 = RF Proximity Card AND Password.

08. ACP Phone Operation Type:

This parameter sets whether The ACP phone is used a s a Door Phone or as a Wall Mounted Telephone

      0 = Door Phone   1 = Wall Mounted Phone

Program (51 to 59)-code-IP : Toll Plans – Allowed Digits – Class 1 to 9

51-code-01 Allow	code = code no 01-16, IP = 01-12
- - - - - - - - - - - -	System default

General:

This program sets allowed exception numbers for Toll Class 1. These Modes should be read in conjunction with Modes 61 to 66.

Description:

There are 16 codes for each Toll Class and each code contains up to 12 digits

In default any station allocated to Toll Plans 1 to 6 will be able to dial unrestricted until the associated Modes are programmed.

Allowed entries in this Mode are 0 to 9, d and _. d = Don't care and means that any digit can be dialled in this position. _ = No digit is allowed to be dialled beyond this position. If a digit is allowed as the beginning of a number then the entry should be filled with don't care's to the end of the line or the caller will not be able to dial the full number.

Modes 51 to 56 are used in conjunction with Modes 61 to 66 and Modes 57 to 59 are used independently.

Toll Classes:

Class	Function	Prog. Mode
0	Unrestricted	Default
1	Use Mode 51 for the Unrestricted numbers. Use Mode 61 for the Restricted numbers	Mode **51,61**
2	Use Mode 52 for the Unrestricted numbers. Use Mode 62 for the Restricted numbers	Mode **52,62**
3	Use Mode 53 for the Unrestricted numbers. Use Mode 63 for the Restricted numbers	Mode **53,63**
4	Use Mode 54 for the Unrestricted numbers. Use Mode 64 for the Restricted numbers	Mode **54,64**
5	Use Mode 55 for the Unrestricted numbers. Use Mode 65 for the Restricted numbers	Mode **55,65**
6	Use Mode 56 for the Unrestricted numbers. Use Mode 66 for the Restricted numbers	Mode **56,66**
7	Use Mode 57 for the Unrestricted numbers.	Mode **57**
8	Use Mode 58 for the Unrestricted numbers.	Mode **58**
9	Use Mode 59 for the Unrestricted numbers.	Mode **59**
*	Use Mode 51-56 for unrestricted numbers. Use Mode 61-66 for all restricted numbers	000
D	**Cannot access the trunk line.**	

Note 1: Default numbers in Mode 61, 62, 63, 65, 66 are: dddddddd
Note 2: Default numbers in Mode 51, 52, 53, 55, 56, 57, 58, 59 are:------------
Note 3: d: Don't care: any digit is allowed in this position.
Note 4: _: The system does not allow any digits dialled after this symbol.

Program (61 to 66)-code-IP : Toll Plans – Restricted Digits – Class 1 to 6

61-code-01 Restrict dddddddddddd	Code = code no 01-16, IP = 01-12 System default

General:

This program sets Restricted numbers for Toll Class 1. These Modes should be read in conjunction with Modes 51 to 56.

Description:

There are 16 codes for each Toll Class and each code contains up to 12 digits
In default any station allocated to Toll Plans 1 to 6 will be able to dial unrestricted until the associated Modes are programmed.

Allowed entries in this Mode are 0 to 9, d and _. d = Don't care and means that any digit can be dialled in this position. _ = no digit is allowed to be dialled beyond this position. If a digit is allowed as the beginning of a number then the entry should be filled with don't care's to the end of the line or the caller will not be able to dial the full number.

Modes 51 to 56 are used in conjunction with Modes 61 to 66 and Modes 57 to 59 are used independently and do not have an associated restriction table.

In Default stations which are allocated Toll Plans 0 to 6 are able to dial any numbers.
When a station is allocated Toll Plans 7 to 9 they can dial no digits until the plans are programmed.

Mode 51 and 61 combine to produce Toll Plan 1, Mode 52 and 62 combine to produce Toll Plan 2 and so on up to Mode 56 and 66 for Toll Plan 6. Toll Plans 7, 8 and 9 are associated with Mode 57, 58 and 59.

The principle of these Toll Plans up to Plan 6 is to deny unwanted digits in Mode 61 to 66 and then allow any exceptions for these digits in Mode 51 to 56. If 0ddddddd is entered in Mode 61 and 04dddddddddd_and 01ddddddd are entered in Mode 51 then a station allocated to Toll Plan 1 will be able to dial any local number plus 04 anything (Australian Digital and CDMA Mobile phones) . Any other number beginning with 0 will be disallowed.

This example is based on the Australian network for the city of Sydney (area code 02, local calls start with the digits 8 and 9) where an 8 digit local numbering scheme is in place and allows local calls plus mobiles (04x)

Set Mode 41-11-05/06 = 7

When this mode is set and Mode 57 is still at default then station 11 will be totally restricted.

Set Mode 57 to the following,

> Mode 57-01 = 8dddddddddd
> Mode 57-02 = 9dddddddddd

Station 11 will now be only able to dial numbers beginning with 8 and 9 .
To allow mobiles program Mode 51 to the following.

> Mode 57-03 = 04dddddddd

Example 2: All calls except ISD and 19 numbers.

Set Mode 41-11-05/06 = 1

When this mode is set and Mode 51 and 61are still at default then station 11 will be unrestricted.

Set Mode 61 to the following,

> Mode 61-01 = 00dddddddddd
> Mode 61-02 =19dddddddddd
> Mode 61-03 =14dddddddddd

Station 11 will now be only able to dial numbers beginning with digits 2 to 8.
To allow mobiles (04X) free calls (1800xxxxxx) and directory assistance (12dddd) program Mode 51 to the following.

> Mode 52-01 = 1800dddddddd
> Mode 52-02 = 04dddddddddd
> Mode 52-03 = 12dddddddddd

Program 67-gp-IP : Hunt Group Pilot Number

```
67-gp HUNT NO
00   T
```
GP = 01-10
System default

Item Pointer	Display Data	Programming Data Description	Default
01	00-10	Hunting Group Pilot Number	00
02	0-9	Hunting Group Ring Method	0 = Common

General:

This program sets Pilot Numbers for Hunting Groups 1 to 10 and their ringing method.

Description:

01. Hunting Group Pilot Number:
There are 10 Hunt Groups available in the G1-824/G2-1648. Each Hunt Group is assigned a Pilot Number in this Mode. The pilot number can be any valid unused number and will have the same number of digits as the station-numbering scheme used in the system (2, 3 or 4).

Hunt group pilots can be assigned to be rung from Single Digit DISA.

02. Hunting Group Ringing Method:
Assign one of 3 ringing methods for each hunting group.
0 = Common   1 = Linear   2 = Circular   3~9= Follow programming mode 05-06-08

Once Hunting Ring Type is set here or in Mode 05-06-08 then ringing this pilot number will access the stations in the group according to the ringing method selected and the order in which they are programmed in Mode 68 (Day) and Mode 69 (Night). Each Hunt Group can be from 1 to 5 stations in the G1-824 and 1 to 16 stations in the G2-1648.

There are 3 types of Ring available, Common, Linear and Circular.

If **Common Ring** is enabled then calling the pilot number will always ring all available stations in which they are programmed in Mode 68 or 69.

If **Linear Ring** is enabled then calling the pilot number will always call the first available station in the order in which they are programmed in Mode 68 or 69.

If **Circular Ring** is enabled then the stations will be called one after the other for each succeeding call until all have taken a call and then the Ring will revert to the beginning of the Ring assignment and then repeat the process.

Stations can remove themselves from receiving Hunt calls by using the DND key but this will also prevent them from receiving direct calls.
It is still possible to call each station in the Hunting group directly by dialling it's own individual station number.
If a station in a Hunt Group has set call forward to a station or another Hunt Group (for instance Voice Mail Group) then only direct calls to the station will be forwarded. If Hunt calls come to the station and it is call forwarded it will still ring for the call.
Related System Programming Modes: 05-06-08, 67, 68, 69

Program 68-gp-IP : Hunt Group Assignment – Day

```
68-GP-IP HUNT DA
00  00  00  00  00
```

GP = 01-10, IP = 01-05
System default

General:

This program sets Stations into Hunting Groups 1 to 10 for the G1-824 assigns the order in which they will be accessed during Daytime.

Description:

There are 10 Hunt Groups available and 5 stations for the G1-824 and 16 for the G2-1684 can be assigned into each group for Day and Night time.

There are 3 types of Ring available, Common audible ,Linear and Circular.
If Common Audible is enabled then all stations will ring simultaneously.
If Linear Ring is enabled then calling the pilot number will always call the first available station in the order in which they are programmed in Mode 68 or 69.
If Circular Ring is enabled then the stations will be called one after the other for each succeeding call until all have taken a call and then the Ring will revert to the beginning of the Ring assignment and then repeat the process.

It is still possible to call each station in the Hunting group directly by dialling its own individual station number.

Related System Programming Mode: 05-06-08, 67, 68, 69

Program 69-gp-IP : Hunt Group Assignment – Night

```
69-GP-IP HUNT NI
00  00  00  00  00
```

GP = 01-10, IP = 01-05
System default

General:

This program sets Stations into Hunting Groups 1 to 10 for the G1-824 assigns the order in which they will be accessed during Night time.

Description:

There are 10 Hunt Groups available and 5 stations for the G1-824 and 16 for the G2-1684 can be assigned into each group for Day and Night time.

There are 3 types of Ring available, Common audible ,Linear and Circular.
If Linear Ring is enabled then calling the pilot number will always call the first available station in the order in which they are programmed in Mode 68 or 69.
If Circular Ring is enabled then the stations will be called one after the other for each succeeding call until all have taken a call and then the Ring will revert to the beginning of the Ring assignment and then repeat the process.
It is still possible to call each station in the Hunting group directly by dialling its own individual station number.

Related System Programming Mode: 05-06-08, 67, 68, 69

Program 70-Cd-IP : ISDN Interface Specifications Program – G1-824

70-Cd-IP S/T TYP 111	Cd = 01-04, IP = 01-03 System default

General:

To assign the ISDN interface to "S" interface or "T" interface.

Description:

Cd= 01 is to assign the "S" or "T" interface for the ISDN port on G1-SIU card.
   0= "S" interface. It can connect two ISDN devices. Use Program 43-CN to set the Device Station
      Number (Station Type is 9).
   1= "T" interface. It can be connected to "NT" interface of ISDN line.

Cd= 02 is for test purposes only.
   0= Loopback disabled
   1= Loopback enabled

Cd= 03 is for connection method.
   0= Point to Point(recommend '0' for internal ISDN S interface use if only one ISDN device connected)
   1= Point to Multi-point (Default)
   2= Point to Multi-point and ignore the unknown MSN or DDI number (not assigned in mode 72)

● This application is normally for other ISDN devices (e.g. ISDN TA, ISDN video conference, ISDN card, …)
   that are connected to the NT1 with the G1-824.

Cd= 04 is for ISDN PLL (Phase Loop Lock)
   0= Auto detect
   1= Lock this ISDN line for PLL. Signal.

The following table is the Cross Reference Table for physical position of ISDN interface and
programming position.

Cd					
		Cd=01	Cd=02	Cd=03	Cd=04
IP	IP=01	1st interface	1st interface	1st interface	1st interface
	IP=02	2nd interface	2nd interface	2nd interface	2nd interface
	IP=03	3rd interface	3rd interface	3rd interface	3rd interface

Example:

70-01-IP S/T TYP 110

It sets the 1st and 2nd ISDN interface to "T" interface and 3rd interface to "S" interface.
The user can program the station number in program mode 43, port 61~68.

Program 70-Cd-IP : ISDN(BRI/PRI) Interface Specifications Program G2-1648

70-Cd-IP S/T TYP
111111

Cd = 01-04, IP = 01-06
System default

General:

To assign the ISDN interface to "S" interface or "T" interface.

Description:

For ISDN BRI:

Cd= 01 is to assign the "S" or "T" interface for the ISDN port on G2-SIU card.
  0= "S" interface. It can connect two ISDN devices. Use Program 43-CN to set the Device Station Number (Station Type is 9).
  1= "T" interface. It can be connected to "NT" interface of ISDN line.

Cd= 02 is for test purposes only.
  0= Loopback disabled
  1= Loopback enabled

Cd= 03 is for connection method.
  0= Point to Point (recommend '0' for internal ISDN S interface use if only one ISDN device
connected)
  1= Point to Multi-point (Default)
  2= Point to Multi-point and ignore the unknown MSN or DDI number (not assigned in mode 72)
   This application is normally for other ISDN device (e.g. ISDN TA, ISDN video conference, ISDN card, …) that are hooked to the NT1 with the GDS-600.
For Australian networks the usual connection is Point To Point. Network features such as Diversion will only work on Point to Point on the Telstra network

Cd= 04 is for ISDN PLL (Phase Loop Lock)
  0= Auto detect
  1= Lock this ISDN line for PLL. Signal.

Note:
The following table is the Cross Reference Table for physical position of ISDN interface and programming position.

Cd					
		Cd=01	Cd=02	Cd=03	Cd=04
IP	IP=01/02/03	1st /2nd/3rd port of 1st SIU	1st /2nd/3rd port of 1st SIU	1st /2nd/3rd port of 1st SIU	1st /2nd/3rd port of 1st SIU
	IP=04/05/06	1st /2nd/3rd port of 2nd SIU	1st /2nd/3rd port of 2nd SIU	1st /2nd/3rd port of 2nd SIU	1st /2nd/3rd port of 2nd SIU

Example:

70-01-IP S/T TYP
110111

It sets the 1st,2nd, 4th, 5th, 6th ISDN interface to "T" interface and 3rd interface to "S" interface. The user can program the station number in program mode 43, port 61~68.

For ISDN PRI:

Cd= 01 is to assign the "TE" or "NT" point for the G2-PIU card.

 000000= "NT" interface. The PRI card can simulate a CO site.
 111111= "TE" interface. It can be connected to "NT" interface of ISDN PRI line.

Australian setting is 111111

 Cd= 02 is for test purposes.

 000000= Loopback disabled – Must be set to this pattern
 011000= Loopback enabled - Only for approval or measurement to test Bit Error Rate.

Cd= 03 is for connection method.

 000000   Must be set to this pattern

Cd= 04 is for PLL (Phase Loop Lock)

 110000   Must be set to this pattern

Program 72-St : ISDN Called Party Extension Number Assignment

72-St ST NUM dddddddddddd 00	St= Extension Number System default

General:

To assign an ISDN MSN/DDI number to a station or station hunting group.

Description:

- Each incoming ISDN MSN or DDI number can ring a station or a hunting group.
- If ISDN MSN or DDI number is assigned for a station in this mode and this station is used to make an external call, the called party will receive the ISDN CLI number from this station.
- A Maximum of 12 digits can be assigned.

Example: A

72-12 ST NUM 29611356dddd 00	If the outside party calls ISDN number 29611356, station 12 will be rung.

Example: B

72-60 ST NUM 29611356dddd 01	If the outside party calls ISDN number 29611356, station hunting group 01 will be rung.

When assigning a Group to ring for an Indial number, select an unused station number from the ISDN extension ports of 41-48, 51-58 or 61-68 and then assign the Indial number and the Hunt group number.

Program 73-St : ISDN Extension Sub-Address Assignment

73-St ST Sub Add dddd	St= Extension Number System default

General:

To assign the ISDN Sub-Address Numbers to the internal extensions.

Description:

- If the ISDN incoming call has the information of the Sub-Address number, system will ring this desired extension directly.
- Each extension can have its own Sub-Address Number.   If there are two extensions that have the same Sub-Address Number, only the first extension can be rung.
- Maximum 4 digits can be assigned.

Example:

73-553 ST Sub Add 1234	Assign an identifying Sub-Address Number 1234 to extension 553 for the ISDN incoming call.

Program 75-Num-IP : LCR - Analysis Table

75-Num-IP Dg Tab - - - - - - - - - - 0 0	Num = 001-500 System Default.

Item Pointer ----------	Display Data ----------	Programming Data Description --	Default ----------
01-10	0~9, *,	Under routing digits-	#, _, d
11-12	01~20	Routing Table	00

General:

This program assigns the routing table for the specific dialled number.

Description:
500 specific dialled numbers can be assigned.
20 routing tables can be used.
Each specific dialled numbers can be assigned to a routing table.
The dialled digits could be 0~9, *, #. 'd' is the wildcards. '-' means no digit.

Related system Programming: 05-13-07. 05-13-08, 75, 76, 77, 78-st-01, 78-st-02

Program 76-Num-Tm : LCR – Routing Table

76-Num-Tm Rou Ta	Num = 01~60 Tm = Time Schedule A, B, C
00 00 0 00 0 00	System Default.

Item Pointer	Display Data	Programming Data Description	Default
01,02	00~23	Starting Hour of this Routing Table	00
03,04	00~23	Ending Hour of this Routing Table	00
05	0~8	The 1st priority trunk group for dialling	0
06,07	00~99	Modifying table for the 1st priority trunk group	00
08	0~8	The 2nd priority trunk group for dialling	0
09,10	00~99	Modifying table for the 2nd priority trunk group	00
11	0~8	The 3rd priority trunk group for dialling	0
12,13	00~99	Modifying table for the 3rd priority trunk group	00
14	0~8	The 4th priority trunk group for dialling	0
15,16	00~99	Modifying table for the 4th priority trunk group	00

General:

This program assigns different time schedules, the priority to select different trunk groups and the modifying tables for the routing tables.

Description:

20 routing tables can be used for normal operation plus 20 for the first holiday and another 20 for the second holiday.
3 time schedules can be assigned for each routing table.
4 priority trunk groups can be assigned for each routing table. (If there is no trunk group assigned here, system will use Dial 9 trunk group instead.)
4 modifying tables can be assigned for each routing table.
For weekly holiday 1, system will refer to 76-(21~40).
For weekly holiday 2, system will refer to 76-(41~60).

Time Schedule A & B:
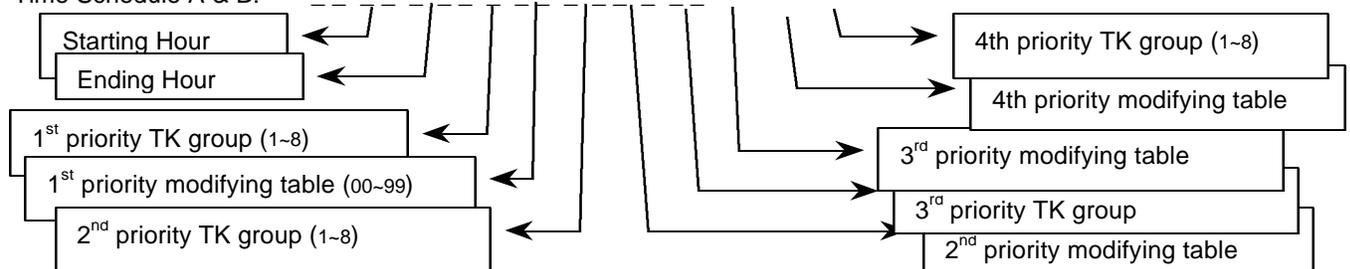
Time schedule C does not have the Starting/Ending hour setting. Only priority trunk groups and modifying tables need to be assigned. . If only 1 Time Zone is to be used then use Time Schedule C which will automatically cover 24 hours if Schedule A and B are blank.

Related system Programming: 05-13-07. 05-13-08, 36, 41-ST-04, 75, 76, 77, 78-st-01, 78-st-02

Program 77-Num : LCR – Modifying Table

77-Num-IP Mo Tab
00 ddddddddd

Num = 01~99
System Default.

Item Pointer	Display Data	Programming Data Description	Default
01-02	00~10	Deleted Digit Length	00
03-12	0~9, *, #, -, d, T, p	Added Digits	ddddddddd

General:

This program designs the rules for changing the dialled number to the routed number.

Description:

System will delete the first nn digits and then added the assigned digits in the front of the dialled numbers.
The added digits can be 0~9, *, #, p, T.
'd' is the wildcard. '-' means no digit.
_ = Extension Number (for LCR Extension Billing).
'-' is no digit.
'p' is the pause character.
'T = means to chain to next modifying table with current one for long digit strings.

Note: LCR Extension Billing

Versions after G2-X10e have added a way of inserting the Extension Number into the dialled string of digits inserted by the LCR tables.

For example if the carrier access code is 1346 and system inserts this before numbers dialled to route the calls to this carrier. Below setting in mode 77 is able to add the extension number into the dialled string of digits inserted by the LCR tables.

    77. = 00 1346_ddddd Where _ = Extension Number

Dialling 907884234033 from extension 201 using the above rule would result in 134620107884234033 being sent to the Line.

Dialling 907884234033 from extension 223 using the above rule would result in 134622307884234033 being sent to the Line.

Related system Programming: 05-13-07. 05-13-08, 75, 76, 77, 78-st-01, 78-st-02

Program 78-st-IP : Station Class of Service – 6

```
78-st-IP STCOS
0 0 0 0 0 0 0 0
```
st = Station No. (2-4 digits) IP = 01-08
System Default

Item Pointer	Display Data	Programming Data Description	Default
01	0-5	LCR - Routing Level	0= Disable LCR
02	0-1	LCR – Direct Access a Trunk	0= Not Allowed
06	0-2	USA 1A2 Emulation feature (Station)	0= Disable

Description:

01. LCR Routing Level

This parameter assigns the LCR routing level for each station.

0 = Disable LCR.
1 = Allow this station to use the 1st priority trunk group only.
2 = Allow this station to use the 1st and the 2nd priority trunk groups only.
3 = Allow this station to use the 1st~3rd priority trunk groups only.
4 = Allow this station to use the 1st~4th priority trunk groups.

   5 = Allow this station to use the 1st~4th priority trunk groups. If there is not any available trunk in the 1st~4th
   priority trunk groups, system will allow this station to use normal dialling.

Related system Programming: 05-13-07. 05-13-08, 75, 76, 77, 78-st-01, 78-st-02

02. LCR – Direct Access a Trunk

This parameter assigns the right of the station to select a trunk directly under LCR environment is enabled.

   0 = Do not allow to access a trunk directly (need to dial 9 (or 0) first).

   1 = Allow this station to access a trunk directly (by pressing line key button). System will assign any pre-
   assigned idle trunk for this extension.

   2 = Allow this station to access a trunk directly (by pressing line key button). System will assign such
   dedicated idle trunk for this extension. Stations which have this facility enabled can only, access trunks,
   which are in their own trunk group set in 41-STN-04. LCR Routing will still apply for the calls but if the
   LCR route (mode 76) has the trunk group set to 0 which means use station trunk group.

Related system Programming: 05-13-07. 05-13-08, 75, 76, 77, 78-st-01, 78-st-02

06. USA 1A2 Emulation (Station Programming):
When an extension talks with a trunk, other extensions can make a conference by pressing this Trunk's button if
the 1A2 Emulation access is set to yes.
        0 = No Access   1 = Access with tone notification   2 = Access without tone notification

The 1A2 Emulation status is set below:

29-Tk-06	78-St-03	Status
0	N/A	No access
1	0	No access
1	1	access with tone
1	2	access with no tone

Even if the 1A2 Emulation status is access, extensions can temporarily disable by pressing the Function key: [1A2 Emulation Privacy] – (FUN:24 for DSS key in mode 07), when the extension sets the 1A2 Emulation Privacy, the LED will switch on, and other extensions can't do the 1A2 Emulation, when the extension presses [1A2- Emulation Privacy] again then1A2 Emulation Privacy is off and the LED will also be off.

Related System Programming Mode: 07, 29-TK-06, 78-ST-03

Program 83-st-IP : Register Memory Block for CLI history buffer

| 83-st-IP CLI-T b1 b2 | st = Station No. (2-4 digits) IP = 01-02 blocks (2 max.) for a Station |

b1/b2: Block 1/2 of CLI buffer for each extension

General:

This program divides sets of **CLI history buffer** into blocks for use by extensions.

Description:

● Program **05-13-03,** the Individual CLI history buffers are assigned:

05-13-03	Memory Block Size	Max. Memory blocks
0	10 sets/Block	24 Blocks
1	20 sets/Block	12 Blocks
2	30 sets/Block	8 Blocks
3	40 sets/Block	6 Blocks

● Each station can use up to 2 blocks.
● The next assigned block must be null or continuous after the first assigned block number for each extension. That means if the first assigned block number is "n" then the next assigned block must be "0 = null" or "n+1".

Example:
Mode 05-13-03=0

| 83-**13**-IP CLI-T **01 02** | **13**: Station No. (2-4 digits) **01 02**: Station 13 can use block **01** and **02** for CLI history buffer and it could store 20 sets (=10 + 10). |

Mode 05-13-03=1

| 83-**15**-IP CLI-T **04 00** | **15**: Station No. (2-4 digits) **04 00**: Station 15 can use block **04** (20 sets) for CLI history buffer. **00**: for no block. |

Mode 05-13-03=3

| 83-18-IP CLI-T **03 00** | **18**: Station No. (2-4 digits) **03 00**: Station 18 can use block **03** for CLI history buffer and it could store 40 sets, **00**: for no block. |

Related System Programming Mode: 05-13-03, 83

Program 84-IP : Home Area Code

84-01-01
NNN

NNN = Assigned home area code (3 digits maximum)

General:

This program assigns the home area code for the CID redial feature.

Description:

● 3-digit input maximum for this entry.
● The home area code can include the toll access code prefix.

Example:

For example, G1-824 is located in Taipei.
Toll access code in Taiwan is '0'
Taipei area code is '2'
Set mode 84 to '02d'.
➢ When ISDN rings in to G1 system, the received number is 2-80710002. If you have set mode 84 as above, system will delete '2' and dial 80710002 for smart redial.
➢ When analogue PSTN line rings in to G1 system, the received number is 02-29645752. If you have set mode 84 as above, system will delete "02" and dial 9645752 for smart redial.
➢ When ISDN rings in to G1 system, the received number is 3-80710001. If you have set mode 84 as above, system will add "0" and dial 03-80710001 for smart redial.
➢ When analogue PSTN line rings in to G1 system, the received number is 03-22489202. If you have set mode 84 as above, system will dial 03-22489202 for smart redial.
➢ If you set 'ddd' in mode 84, system will dial back the original received number directly.

Program 85-nn-IP : Overlay Area Code

85-nn-01
NNN

Nn = 01~05
NNN = Assigned overlay area code (3 digits)

General:

Some larger cities in the United States have exhausted an entire area code. Instead of separating portions and assigning unique area codes to different geographic regions, the Telco has instead introduced an overlay area code. This program assigns 5 sets of overlay area code for CID redial feature.

Description:

● The overlay area code is 3-digit format.
● 5 sets of overlay area code can be assigned for the CID redial feature.

| 86-nnn	nnn = office code
N	N = Redial Pattern

General:

This program assigns the redial pattern for different office codes.

Description:

0 = Redial pattern is NXX-XXXX (Local call: 7 Digit)
1 = Redial pattern is 1-NXX-XXXX (Local Toll: 1 + 7 Digit)
2 = Redial pattern is 1-NXX-NXX-XXXX (Local Toll: 1 + 10 Digit)

CID Redial Feature for USA Market

CID Redial Feature for USA Market

```
                    ┌─────────────┐
                   /  Retrieve the \
                  /   CID number    \
                 /    from the       \
                 \    history        /
                  \   buffer        /
                   └─────────────┘
                          │
                          │
                          ▼
                                          Area Code =                 ┌──────────┐
                                          Overlay Area      No        │ Action D /│
                                    ◇ ─────  Code ?  ─────────────▶  │ Dial 1-NXX-│
                                          │                           │ NXX-XXXX │
       Area Code =          No            │                           │ (Case 6) │
  ◇ ─  Home Area  ─────────▶              │ Yes                       └──────────┘
       Code ?                             ▼
       │                            ┌──────────┐
       │                            │ Action B /│
       │                            │ Dial NXX- │
       │ Yes                        │ NXX-XXXX │
       │                            │ (Case 3) │
       ▼                            └──────────┘

  Office Code's                 Office Code's                   ┌──────────┐
  Pattern = 1 ?     No          Pattern = 2 ?       No          │ Action A /│
◇ (Local Toll: 1+7 ─────────▶ ◇ (Local Toll: 1+  ─────────────▶ │ Dial NXX-│
  digit)                        10 digit)                        │ XXXX     │
  │                             │                                │ (Case 1,2)│
  │ Yes                         │ Yes                            └──────────┘
  ▼                             ▼
┌──────────┐                 ┌──────────┐
│ Action C /│                │ Action D /│
│ Dial 1-NXX-│               │ Dial 1-NXX-│
│ XXXX     │                 │ NXX-XXXX │
│ (Case 4) │                 │ (Case 5) │
└──────────┘                 └──────────┘
```
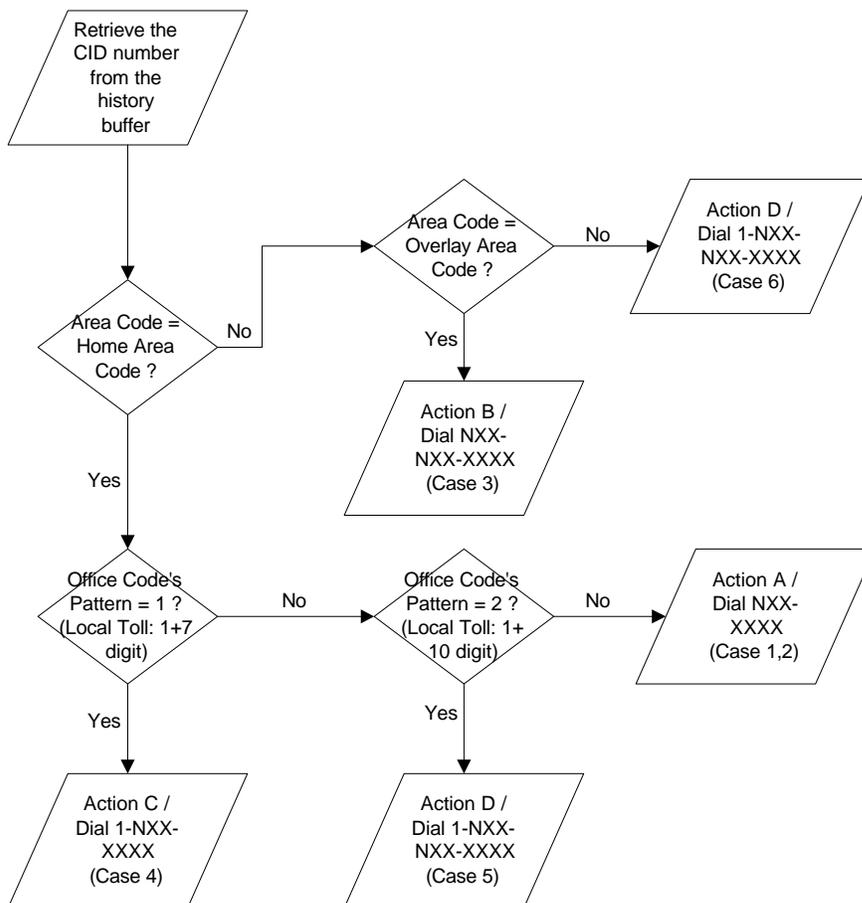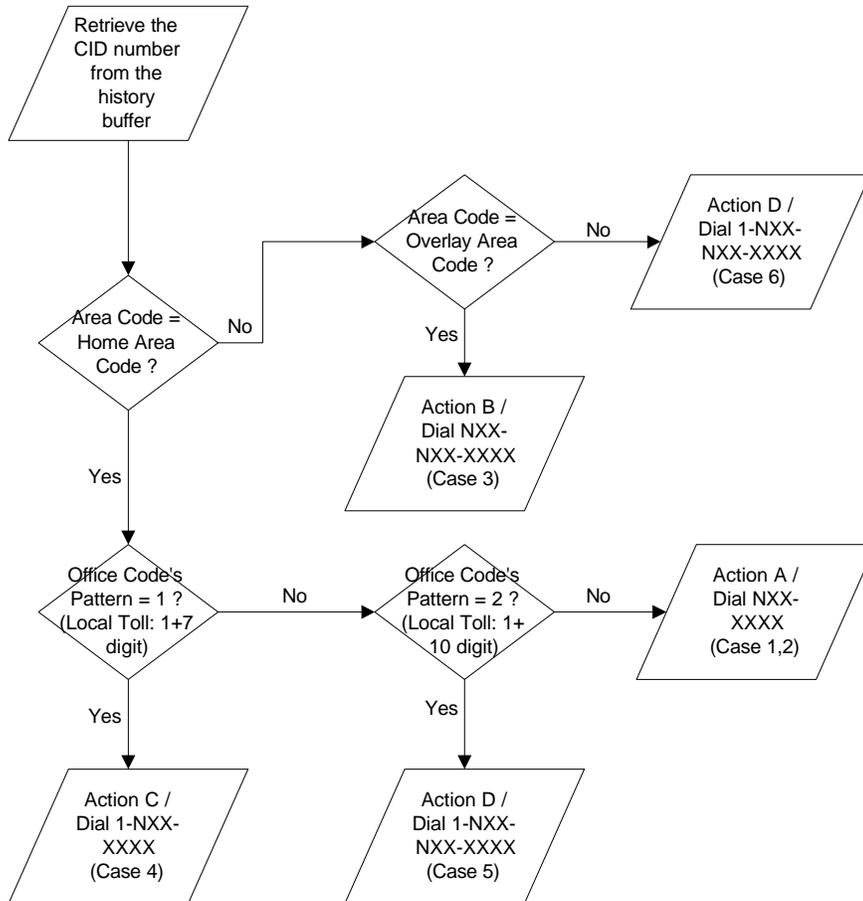
Program 87-CN-IP : ASSIGN DOORPHONE FOR KEY CARD

87-nn-01 Card In
00000000000000

nn = card Number
IP = 01-40 = ACP port number

General:
This program assigns which Key cards can be used on which ACP port to unlock a door.

Description:
Before a key card can be used to operate a door relay it must be enabled in this program mode. A key card can be enabled to unlock more than one door if multiple ACP's are fitted.

0 = Denied to enter   1 = Allowed to enter

Slot on G2-MBU	STU 1	STU/SLU 2	STU/SLU 3	STU/SLU 4	STU/SLU 5
Extension port	11-18	21-28	31-38	41-48	51-58
ACP port	1-8	9-16	17-24	25-32	33-40

Program 88-DP : REGISTER KEY CARD

Register Card
ST:___

Station number of ACP

General:
This program registers key card for use.

Description:
Before a key card can be used with an ACP it must first be registered to it. Once the key card is registered then it will be necessary to proceed to mode 87 to allow the key card to open the door relay associated with the ACP.

To register a key card enter the station number of the ACP

Register Card
ST:115

Press **SAVE**

Wait Registering
Slide please

Place the Key Card over the Speaker position on the ACP and when the ACP beeps remove the Key card and press **SAVE.**

Register Store
Card:01

Press **SAVE**

Registration ok!
Card:01

Program 89-CN-IP : DELETE KEY CARD

89-nn-01 Serial
FFFFFFFF

nn = card number

General:
This program assigns allows the De-registration of the key cards from a system.

Description:
Enter the number (01-99) of the key card to de-register

De-Register Card
Card:01

Press **SAVE**

89-01-01 Serial
FFFFFFFF

Press **REDIAL** to clear the digits

89-01-01 Serial
00000000

Press **SAVE** and the LCD display will move on to the next Key card number.

89-02-01 Serial
00000000

FFFFFFFF: Means Card was registered.
00000000: Means Card was deregistered.

Program 91-TM : ACP TIME LOCK – Assign Time

91-TM Table
00 00 00 00

TM = Time Schedule (00~15)

General:
This program assigns different time schedules for the ACP time lock. Cards assigned in such programmed period can be used to open the ACP door.

Description:
The first 4 digits are starting time and the last 4 digits are stopping time. There are a total of 16 schedules which can be assigned.

91-00 Table
08 30 17 30

Press **SAVE**, means time schedule 00 is from 08:30 to 17:30.

91-01 Table
21 00 22 00

Press **SAVE**, means time schedule 01 is from 21:00 to 22:00.

Program 92-CN : ACP TIME LOCK – Assign Card

92-CN-01 Card In
TM

CN = Card Number (01~99)

General:
This program assigns different ACP time lock schedule for ACP. Cards assigned in such programmed period can be used to open the ACP door.
TM= 00~15 (Mode 91)

Description:

92-06-01 Card In
02

Press **SAVE**, means card 06 use ACP time lock schedule 02 (mode 91-02).

Programming Cross Reference

Incoming Calls

RINGING ASSIGNMENT

01-tk-stn	Day Ringing And Ringing Line Preference Assignment
02-tk-stn	Night Ringing And Ringing Line Preference Assignment
05-01-05	Busy Reminder Tone Interval (Off-Hook Ringing / Busy - Camp-On)
05-02-07	Ring On Timer (Minimum ring to be detected)
05-02-08	Ring Off Timer (Time to hold signal during silent period)
05-08-01	CO Hunt Interval
20-nn	Day/Night Service Schedule
29-tk-07	CO Delayed Ring Timer to Hunting Group
29-tk-08	CO Delayed Ring Overflow Hunting Group
35-tk-07	Day Ring Type
35-tk-08	Night Ring Type

Outgoing Calls

DIAL '9'

05-04-02	Dial '9' Enable/Disable
36-grp-tk	Dial '9' Group Assignment
41-stn-04	Stations Dial '9' Group Assignment

PABX OUTGOING CODE

05-03-04	Code for outside line in PABX (If trunk/trunks are served by PABX)

TRUNK SPECIFICATIONS

05-01-06	Pause Time Duration (For Speed Dial Pauses)
05-01-07	DTMF Generation Time
05-02-05	Flash Time to CO (For Special CO Features or Centrex)
05-02-07	Ring On Time (Minimum ring signal detected)
05-02-08	Ring Off Time (Time to hold signal during silent period)
05-03-01	Make/Break Ratio
35-trk-01	Trunk Type (PABX/CO)
35-trk-02	Trunk Signalling Type (dial pulse/DTMF)

SPEED DIAL

05-01-06	Pause Duration for Speed Dial pauses
05-03-02	Automatic Trunk Search During Speed Dial, Auto Redial, Saved Redial, etc.
05-04-06	Speed Dial Distribution
05-05-03/04	Speed Dial Unrestricted
09-spd-xx	System Speed Dial Locations
42-stn-01/02	Register Memory Block for Personal Speed Dial

AUTO-REDIAL

05-02-03	Auto-Redial Off Hook (wait for answer) Timer
05-03-02	Automatic Trunk Search
05-05-07	Auto-Redial Attempts (Quantity)
05-05-08	Auto-Redial Time (Inter-Call) between attempts

Intercom Calls

INTERCOM CALL SIGNALLING

    05-03-03   Intercom call signalling to electronic telephone sets

STEP CALL

    05-07-01   Intercom Step Call Type
    41-stn-01   Station Group Assignment

DIAL TONE PATTERN

    05-03-07   SLT Dial Tone Pattern Options
    05-04-07   Intercom Single Digit Dialling
    10-grp-xx   Single Digit Dialling Assignment
    41-stn-01   Station Group Assignment

DIRECT STATION SELECT

    07-grp-key   Flexible Key Group Assignment
    41-stn-02   Keyphone Flexible Key Group Assignment

DIAL 0 (CALL OPERATOR)

    05-06-05   Operator/CO access codes
    44-stn-04   Manual Line

INTERCOM DIALLING RESTRICTION

    45-stn-01   Intercom Dialling Restriction

Busy/During Conversation

HOLD AND HOLD RECALL

    05-01-01   Hold Recall Timer (Time until station is warned of hold call)
    05-01-02   Exclusive Hold Recall Timer (Same operation as hold recall)
    05-01-03   Hold Recall Time out (Time before call is rerouted to Operator - After Hold
                     Recall Timer has expired.)
    05-07-04   DISA Recall Capability
    05-12-03   Station ability to place call on Exclusive Hold
    44-stn-02   Station ability to hold a call

BUSY REMIND / CAMP-ON

    05-01-05   Busy Reminder Interval (Time between notifications)

CALL SPLIT

    44-stn-03   Call Split

TRANSFER

    05-06-01   Transfer Recall Timer Blind transfer (Camp-On / Busy)
    05-06-02   Transfer Recall Timer blind transfer (No Answer)
    05-08-06   DISA No Answer Recall (To Message) Timer
    05-08-07   DISA Transfer Time (No Digits Dialled)

MESSAGE WAITING LEVEL

    46-stn-02   Message Waiting Level

05-02-02	Interdigit Timeout
05-02-04	Hookswitch Disconnect Timer
05-02-06	Minimum Flash Timer (used to recognize a hook switch flash for hold)
05-04-08	Message Waiting Status Setup
05-06-07	Single Line Telephone Hold Procedure
05-07-02	Toll fraud Protection (Calling Proof)
05-08-03	SLT Busy Remind Tone Timer
05-08-05	SLT Feature Programming Access Code
45-stn-02	Setting Single line type (VM port, Dual Port)

Miscellaneous

MONITOR

40-stn-02	Station Monitor Level

PAGING

40-stn-05	Station Paging Access
40-stn-06	Receive Page Over Speaker
41-stn-01	Station Page Group

CALL FORWARD NO ANSWER TRANSFER TIME

05-01-08	Call Forward-No Answer Timer

HOT LINE

09-spd-nn	System Speed dial number for Hot Line use
47-stn-xx	Hot Line destination for a station

Optional Services

DOOR PHONE & DOOR SWITCH

03-01-ext	Stations to ring upon Door Phone Activation
05-12-04	Door Relay Activation Timer
06-01-fn	Relay Assignment (for DoorPhone latch release)

Voice Mail Integration

01	Day Ringing Assignment
02	Night Ringing Assignment
05-02-04	Single Line Telephone Release (Disconnect) Timer
05-02-06	Single Line Telephone Minimum Flash Timer
05-06-07	Single Line Telephone Hold Procedure
05-10	Voice Mail Leading Digits
05-12-05	Voice Mail Integration Type

All data and specifications are subject to change without notice.   P/N: 5503 4900 0000