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Connect 200

CHIRON **Connect 200**

ISDN provides a digital method of communications giving the user more economical and reliable methods of voice and data communications. The simultaneous use of voice and data coupled with desk-top computer applications software opens a new era in business efficiency tools.

However, there are large quantities of 'legacy' equipment (e.g. PSTN telephones, facsimile machines etc.) still in operation which users do not wish to make redundant. The **Connect 200** has been devised to enable users to utilise their existing analogue equipment on ISDN facilities alongside ISDN equipment. The **Connect 200** simply plugs into the "S" bus along with other ISDN terminals, up to a maximum of eight. Up to two calls (data or voice) can be operational at any one time.

The **Connect 200** has a high degree of intelligence to increase its flexibility. For example, if both ports are configured for the same incoming number then both connected phones will ring until one is answered. If, however, a second incoming call is received while the first is ringing it will not be rejected. The **Connect 200** will automatically allocate a call to each phone, which will continue ringing until answered or until the calling party hangs up. This is completely automatic and needs no user intervention, in this way no calls are lost.

The Connect 200 can be configured to support analogue Calling Line Identification Display. If the equipment attached supports this facility, you can see the number of an incoming call before answering.

The Connect 200

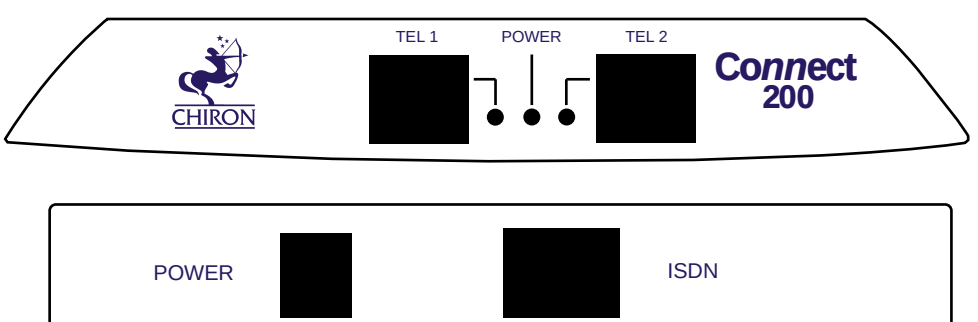
The **Connect 200** is a standard "S" interface device which connects to an ISDN basic rate digital line. The unit can be connected exclusively to an unshared line (point to point mode) or it can share an ISDN line with other ISDN products, (point to multipoint mode). It enables analogue telephones, facsimiles etc. to connect to the ISDN network.

Installation

Installation of the **Connect 200** could not be more simple

- Plug your analogue device(s) into one of the "TEL" sockets, plug the external power supply into the **Connect 200** power socket then turn on the power to the unit.
- Plug the ISDN cable into the wall socket and the other end into the ISDN socket of the **Connect 200**.
- The "POWER" indicator shows the status of the ISDN connection. When steady, the **Connect 200** is synchronised to the ISDN line and ready for calls. When flashing, the connection is not synchronised.

Your PSTN device is now ready to use, on lifting the handset you will hear a dial tone.



Terminal Identity

In multipoint installations, with more than one terminal on the ISDN bus, the units connected to the bus may be differentiated. When an incoming call occurs, the terminal can then decide 'is this the call for me'.

The first differentiator is the type of call. Voice only terminals do not respond to data calls (and vice versa). The **Connect 200** will respond to 'voice' calls for phones, fax or modems. The second check can be an identifier. This is normally a sub-address or a directory number (called Multiple Subscriber Numbering). When installing an ISDN device, if you do not enter a multiple subscriber number then generally it will respond to any call of the right type.

The **Connect 200** supports differentiation by Multiple Subscriber Numbering which is an optional feature on most ISDN networks, to which you must subscribe. See section on Configuration for details on setting this.

Multiple Subscriber Configuration

MSN gives you multiple numbers for the same ISDN line. Thus by correctly configuring your Connect 200 and ISDN terminals you can enable each device to respond to a separate number.

The **Connect 200** has 2 telephone sockets, each can be configured with its own MSN. To configure an MSN, lift the handset of the telephone to be configured and proceed as described below.

In order to store the MSN digits for the **Connect 200** lift the handset of the analogue telephone connected to the **Connect 200** and press:

90 MSN NUMBER#

Upon pressing the first '*' dial tone will no longer be heard. A single tone should be heard once the '#' has been pressed if the entered configuration was valid. If the digits pressed are incorrect you will hear a double tone. If this occurs replace the handset and start again. Up to 23 digits may be stored. All digits entered are saved even after power off.

In order to clear the MSN lift the handset of the analogue device and press:

90#

In order to configure MSN for devices which do not have handsets e.g. FAX machines, you will need to temporarily plug in an analogue telephone. Configure the **Connect 200** and then replace it with the desired equipment.

Calling Line Identification Display

Both analogue telephone sockets support Calling Line Identification Display (CLID). This is compatible with standard analogue Caller Display units or phones with Caller Display built in. CLID can be enabled using a standard analogue phone on either analogue socket and entering the configuration command '*81*13#'.

Note that by the CLID feature is disabled by default. Once enabled, it can be disabled again by the command '*81*#'.

Chiron Connect 200 Configuration Commands - Summary

Configuration Sequence	Name	Description
01#	Approvals testing loop back	Loops ISDN B channels RX to TX (both channels simultaneously). Lifting or replacing either handset clears loop back.
79#	Clear Calling Number match	Clears Calling Number match.
*79*n#	Save Calling Number Match - when set only incoming calls from this number will be actioned.	n = Calling Number up to 23 digits.

80#	Disable receipt of data calls.	Only accepts voice calls, rejects data calls with 'Incompatible Destination'.
*80*1#	Enable receipt data calls.	Accepts data calls as well as voice calls and sounds the ringers under the same rules as for voice calls. (Only makes voice calls.)
81#	Clear analogue CLID.	Disables transmission of CLID to analogue port on incoming call.
*81*13#	Enable analogue CLID.	Enables transmission of CLID to analogue port on incoming call. CLID format according to BT protocol as defined in SIN 227.
82#	Disable sending of CLI before DDI.	Disables sending of CLI before DDI (as enabled by command *96*1#).
*82*1#	Enable sending of CLI before DDI.	Enables sending of CLI before DDI (as enabled by command *96*1#).
83#	Disable disconnect indication.	Disables indication of disconnect on analogue port.
*83*1#	Enable disconnect indication.	Enables indication of disconnect on analogue port by 150ms line break.
84#	Set negotiable TEI.	Unit will negotiate TEI with network.
*84*n#	Set fixed TEI.	Unit will use fixed TEI, value n (0 to 9).
85#	Set Point-Multipoint mode.	Sets ISDN mode to Point to Multipoint.
*85*1#	Set Point-Point mode.	Sets ISDN mode to Point to Point. This enables Overlap Receiving and B Channel negotiation. Note - on most Point to Point lines it is also necessary to set a fixed TEI of '0' (see *84*n#).

86#	Clear Autodial port 1.	Disables autodial on port 1.
*86*n#	Save Autodial port 1 number.	n = autodial number up to 23 digits. This number will be dialled when port 1 goes off hook.
87#	Clear Autodial port 1 auxiliary.	Disables autodial on port 1.
*87*n#	Save Autodial port 1 auxiliary number.	n = autodial number up to 23 digits. This number will be dialled when port 1 auxiliary hook line goes off hook.
88#	Disable auto answer.	Disables auto-answer on port.
*88*1#	Enable auto-answer.	Enables auto-answer on port.
89#	Sets normal hook action.	On/off hook act as normal.
*89*1#	Disables on hook.	Going on hook does not clear call - call can only be cleared by remote party.
*89*2#	On hook clears call. Off hook disabled.	On hook clears current call (if connected) and starts new call. Off hook cause no action.
90#	Clear MSN	Clears MSN number.
*90*n#	Save Multiple Subscriber Number (MSN)	n=MSN up to 23 digits.
91#	Version number	Beeps number of times according to software version number.
92#	Line Snatch disabled.	Disables Line Snatch.
*92*2#	Line Snatch enabled.	Line Snatch algorithm performed if call attempt made and no B Channel available.
93#	Clear country code	Country = UK.

*93*n#	Change country code	n = country code 1= Belgian 2 = European
94#	Clear channel mapping	In-coming calls on any channel accepted (provided other parameters are valid e.g. MSN). Outgoing calls do not specify B Channel required.
*94*n#	Enable channel mapping	Where n = 1 or 2 for the appropriate B Channel. Incoming calls only accepted on B Channel selected. Outgoing calls made only on B Channel selected.
95#	Disable Calling Party No. transmit	Out-going call SETUP messages do not contain any 'Calling Party Number' Information Elements.
*95*1#	Enable Calling Party No. transmit	Out-going call SETUP messages contain 'Calling Party Number' Information Element with number set to saved MSN (if a number is present).
96#	Disable DDI transmit	Prevents digits being transmitted to the user earpiece upon call connection.
*96*1#	Enable DDI transmit	Upon connection of a call, if there was a Called Party Number information element present in the in-coming call message the digits are sent as DTMF tones to the earpiece.
97#	Disable line failure detection	Once the unit is deactivated it stays deactivated until the network re-activates or an out-going call needs to be made.
*97*1#	Enable line failure detection	The unit checks to see if the line is activated and layer 2 communications can be made and sets line fail pin accordingly. Line voltage on port 1 removed if line fails.
98#	Test ring one port	Makes the phone ring 2s after entering the command.
99#	Test ring other port	Makes the other handset ring immediately, when ringing handset picked up the 2 ports are linked and can hear each other.
*9**1234567890#	Init all configurations.	Resets all the configuration variables back to their default values.

Note the following commands act on a per port basis.

*79*n#	Calling number match.
*88*n#	Auto answer.
*89*n#	On hook action.
*90*n#	MSN.
*94*n#	B Channel mapping.

Note - for these commands either port can be used to configure the other port by terminating the configuration sequence with * rather than #.

All other commands affect both ports.

Compliance

The **Co*nn*ect 200** complies with the following European Directives:

1999/5/EC (Radio & Telecommunications Terminal Equipment Directive)
73/23/EEC (Low Voltage Directive)
89/336/EEC (Electromagnetic Compatibility) as amended by 92/31/EEC

The **Co*nn*ect 200** also complies with the ETSI specification TBR 3 - "Integrated Services Digital Network (ISDN); Attachment requirements for terminal equipment connect to an ISDN using ISDN basic access".

This compliance is applicable throughout the European Community.

Safety

Interconnections of Ports

Care should be taken that when interconnecting telecommunications equipment that only like interfaces are interconnected to avoid safety hazards.

The ports on your **Co*nn*ect 200** have the following safety classifications:

ISDN Port TNV operating at SELV and suitable for connection to Basic Rate ISDN interfaces/ports provided by a Public Telecommunications Operator or a Private Branch Exchange or similar equipment.

Tel Port SELV suitable for connection to the TNV interface/port of single line telecommunications equipment such as telephones, faxes and modems.

Power Port SELV for connection of the power brick supplied by the Chiron Systems Ltd.

The definitions of TNV and SELV are:

TNV Telecommunication Network Voltage. (TNV) Circuit. A circuit that, under normal operating conditions carries telecommunication signals. (70.7 V peak or 120 V dc maximum).

SELV Safety Extra-Low Voltage. (SELV) Circuit. A secondary circuit which is so designed and protected that under normal and single fault conditions, the voltage between any two accessible parts does not exceed a safe value. (42.4 V peak or 60 V dc maximum).

Specifications

Dimensions 35mm Height
140mm Width
150mm Length

Power source 9Vdc 600mA

Warnings

The power brick supplied with this equipment carries lethal voltages. Access to the **Co*nn*ect 200** should be restricted to authorised personnel. Changes or modifications which are not expressly approved by the supplier could void the user's authority to operate this equipment.