

## Connecting Current Model Comrex Codecs to Terminal Equipment

---

These are cables required to connect DXR.1 and DXP.1 to the most commonly used terminal equipment in the United States and Canada. These connections are also valid for the external data port on the Nexus and Matrix ISDN Codecs.

The data connections for the DX100 and DX200 codecs are EIA530 using male DB25 connectors. Follow the instructions for current models.

**DB-25 to DB-25:** Supplied with the Comrex codec

**DB-25 to V.35:** Is not provided with the unit. These cables must be purchased separately and are available from Comrex for \$40.

### TERMINAL EQUIPMENT

### CABLE

Adtran ISU128

DB-25 to DB-25

DB-25 to V.35 (both data ports types available)

Adtran 2x64

DB-25 to DB-25 for each data port to be connected.

Motorola UTA220K

DB-25 to V.35 for each data port to be connected.

Adtran, INC and most

DB-25 to V.35

other DSU/CSUs

The data connections for DXR.1, DXP.1, DX100 and DX200 are EIA 530 using male DB-25 connectors. For ISDN Terminal Adapters with DB-25 (EIA 530 or RS530) data ports, a simple straight-through DB-25 (female) to DB-25 (male) cable is needed and this cable is shipped with every Comrex codec at no extra charge.

Check that the DB25 connector on your TA is EIA530 or RS530... our codecs will not operate at other data levels, such as RS232, which may also be implemented on DB25 connectors.

Most DSU/CSUs for Switched 56 and Dedicated Digital Service come with V.35 (34-pin) connectors. To connect to these, Comrex has a female DB-25(EIA530) to male V.35 cable for \$40. For connecting our EIA 530 codecs to terminal equipment with X.21 connectors, Comrex sells a DB-25 EIA530 (DB-25 Female) to X.21 (DB-15 Male) cable for \$40. (This cable is not suitable for connecting an X21 codec to an EIA530 TA since the connector genders are incorrect.)

## Connecting Older Comrex Digital Codex with V.35 Connectors

If you wish to connect older DXP or DXR codex with a V.35 connector to a Terminal Adapter with EIA 530 (DB-25), you may use Comrex's V.35 to DB25 cable, but you will require a gender changer for the DB25 end connecting to the Terminal Adapter.

### A note on EIA530 to V.35 conversion

Although there are differences between V.35 and EIA530 levels, these do not practically affect the operation of our digital audio codex. The main difference is the way in which handshaking signals are carried. DTR (Data Terminal Ready) and CTS (Clear to Send) are the pertinent handshaking signals:

- V.35 handshaking signals are RS232 levels (unbalanced +/-12V)
- EIA530 handshaking signals are RS422 levels (balanced +/- 2.5V)

CTS is not an issue because our codex look for valid data from the algorithm and not from the Terminal Adapter (TA). DTR can be an issue if the TA is programmed to be looking for it. The Comrex Codex provide a V.35 compatible DTR signal on pin 24 of the EIA530 connector. This should be cabled to the V.35 DTR lead pin "H".

## Pin Connections for Comrex EIA530 (DB-25) to V.35 Cable

EIA 530 (DB-25)	SIGNAL	V.35 (34-PINM)
1	Shield A	
2	Transmit Data A	P
3	Receive Data A	R
7	Ground	B
9	Receive Clock B	X
12	Transmit Clock B	AA
14	Transmit Data B	S
15	Transmit Clock A	Y
16	Receive Data B	T
17	Receive Clock A	V
24	Data Terminal Ready	H

## Comrex EIA530 (DB-25) to X.21 Cable

EIA 530 (DB-25F)	SIGNAL	X.21 (DB-15M)
2	Transmit Data A	2
20	Data Terminal Ready A / Control	3
3	Receive Data A	4
6	Data Set Ready A / Indication	5
15,17	Clock A	6
7	Ground	8
14	Transmit Data B	9
23	Data Terminal Ready B / Control	10
16	Receive Data B	11
22	Data Set Ready B / Indication	12
9,12	Clock B	13
1	Shield, Ground	Shell

## V.35 to V.35 Straight-through Cable

V.35 (34-PINM)	SIGNAL
B	Ground
V	Receive Clock A
X	Receive Clock B
R	Receive Data A
T	Receive Data B
P	Transmit Data A
S	Transmit Data B
Y	Transmit Clock A
AA	Transmit Clock B
D	CTS
H	DTR



## Comrex EIA530 (DB-25) to Securicor 3NET IQ-400TA

EIA 530 (DB-25F)	SIGNAL	IQ-400 (DB-25M)
2	Transmit Data A	2
3	Receive Data A	18
7	Ground	7
9,12	Receive/Transmit Clock B	9
14	Transmit Data B	14
15,17	Transmit/Receive Clock A	21
16	Receive Data B	16
24	DTR (unbalanced)	20