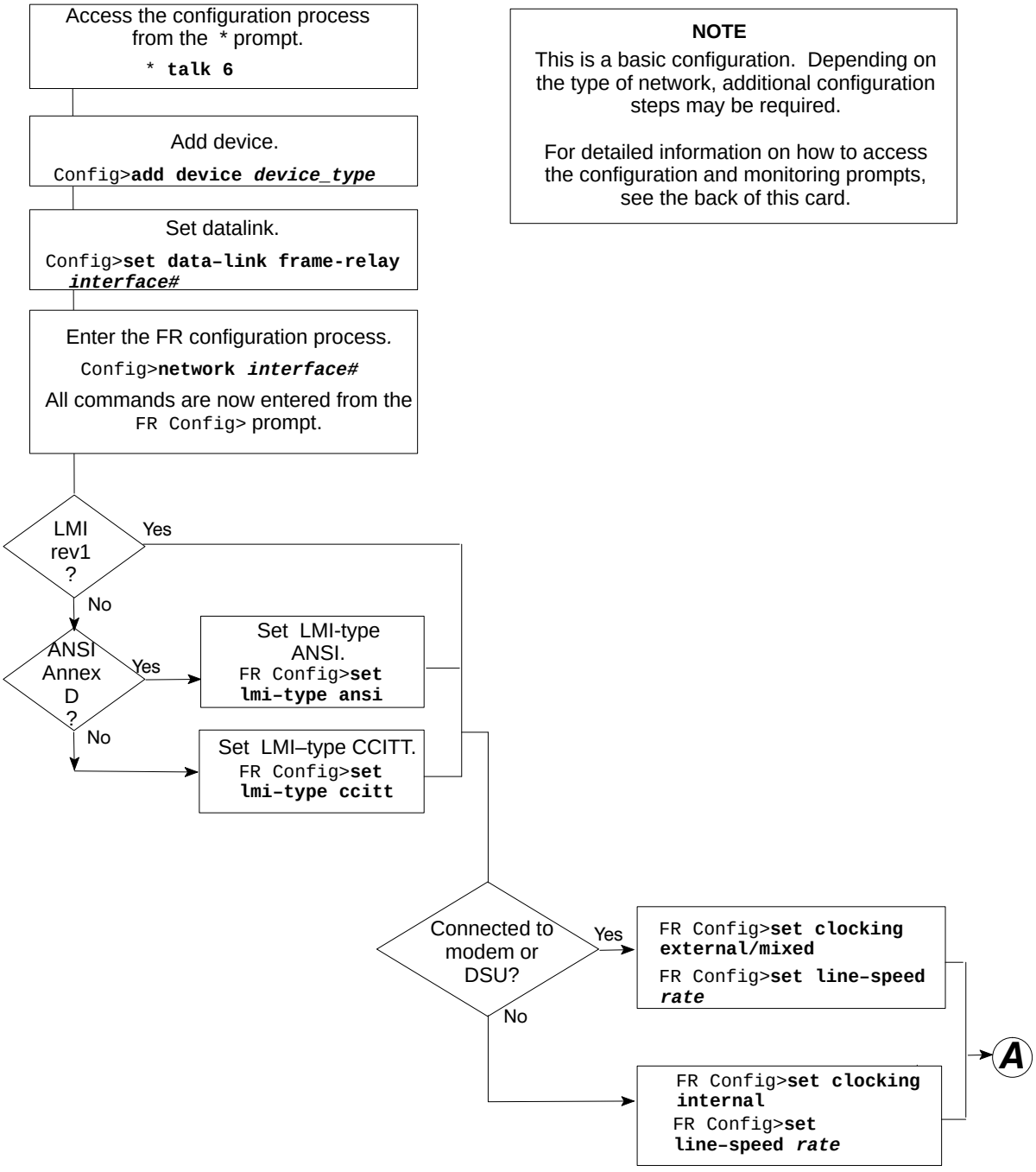
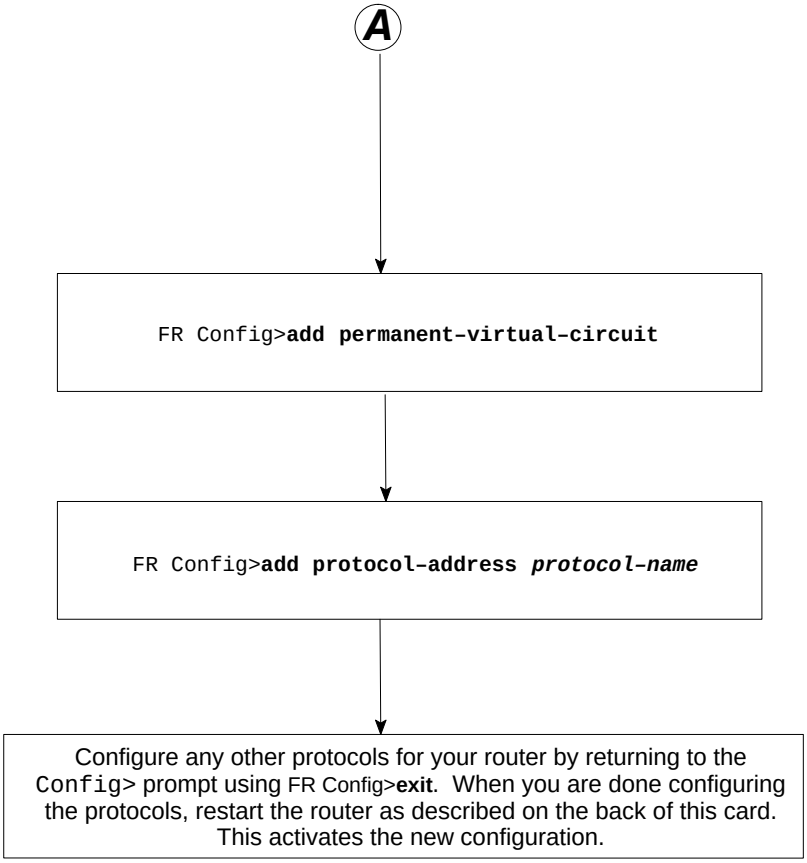
Configuring Frame Relay



Part Number: AV–QL24C–TE
Frame Relay Quick Reference Card
Version 1.1
January 1996


A
FR Config>add permanent-virtual-circuit
FR Config>add protocol-address protocol-name
Configure any other protocols for your router by returning to the Config> prompt using FR Config>exit. When you are done configuring the protocols, restart the router as described on the back of this card. This activates the new configuration.

Frame Relay Configuration Commands

This section summarizes the frame relay configuration commands. Enter these commands at the `FR config>` prompt. The back of this card tells you how to display this prompt. Enter ? to list available commands or their options.

add

permanent-virtual-circuit

Adds PVCs in the range 16 to 1007. The maximum number is approximately 64, but the actual number supported by the interface is affected by the configured size of the receive buffer on the interface.

protocol-address

Adds statically-configured destination protocol addresses to the FR interface. This parameter prompts you for different information depending on the type of protocol that you are adding.

change permanent-virtual-circuit

Modifies a PVC that was added with the **add permanent-virtual-circuit** command.

disable

cir-monitor

Disables the circuit monitoring feature that enforces the transmission rate which was configured using **add permanent-virtual-circuit**.

congestion-monitor

Disables the varying of a circuit's information rate in response to congestion.

lmi

Disables all management activity.

multicast-emulation

Disables multicast emulation on each active PVC.

orphan-circuits

Prohibits the use of nonconfigured circuits at the interface.

protocol-broadcast

Prohibits protocols such as RIP from functioning over the FR interface.

enable

cir-monitor

Enables the circuit monitoring feature that enforces the transmission rate configured using **add permanent-virtual-circuit**.

congestion-monitor

In response to congestion, allows a circuit's information rate to vary between a minimum of 0.25 times the CIR and a maximum of the line speed.

lmi

Enables all management activity.

multicast-emulation

Enables multicast emulation on each PVC when a protocol multicast is forwarded.

orphan-circuits

Enables the use at the interface of all nonconfigured circuits.

protocol-broadcast

Allows protocols like RIP to function over the FR interface.

list

all

Includes the output of:
list hdlc
list lmi
list permanent-virtual-circuits
list protocol-addresses

hdlc

Displays frame relay HDLC configuration.

lmi

Displays logical management and related configuration information about the FR interface.

list *(continued)*

permanent-virtual-circuits

Displays all the configured PVCs on the FR interface.

protocol-address

Displays all the statically-configured protocol address circuit mappings at the FR interface.

remove

permanent-virtual-circuit

Deletes any configured PVC in the range of 16 to 1007.

protocol-address

Deletes any statically-configured protocol address.

set

cable *physical-interface-type data-connection-type*

Sets the cable type for the network physical link.

encoding *type*

Sets the transmission encoding scheme for the interface to NRZ or NRZI.

frame-size *size*

Sets the size of the network layer portion of frames transmitted and received on the data link.

idle *state*

Sets the data-link state to either Flag or Mark.

lmi-type *management type*

Sets management mode to Rev1, ANSI, or CCITT.

n1-parameter *count*

Sets the number of t1 time intervals that expire before the FR interface queries management for complete PVC status.

n2-parameter *max#*

Sets the number of errors that can occur in the management window monitored by the n3-parameter before the interface resets.

n3-parameter *max#*

Configures the number of monitored management events for measuring the n2-parameter.

p1-parameter *max#*

Configures the maximum number of PVCs supported by the FR interface.

t1-parameter *time*

Configures the interval (in seconds) that the FR interface takes to perform a sequence number exchange with FR management.

transmit-delay

Allows the insertion of a delay between each transmitted HDLC frame.

exit

Returns to the previous prompt level.

Frame Relay Monitoring Commands

To list the Frame Relay console commands and their options, enter a ? at the FR> prompt.
The back of this card tells you how to display the FR> prompt

clear

Removes all statistics from the FR interface.

disable

cir-monitor

Disables CIR monitoring.

congestion-monitor

Disables congestion monitoring.

enable

cir-monitor

Enables CIR monitoring.

congestion-monitor

Enables congestion monitoring.

list

circuit *pvc#*

Displays detailed information for the specified PVC.

lmi

Displays statistics relevant to the logical management on the FR interface.

permanent-virtual-circuits

Displays information for all configured PVCs on the FR interface.

all

Displays circuit, management, and PVC statistics on the FR interface.

set circuit

Assigns values to a PVC for the committed information rate (CIR), committed burst rate, and excess burst rate.

exit

Returns to the previous prompt level.

Configuring the Router

Enter configuration commands at the `Config>` prompt. To enter frame relay configuration commands, go to the `FR Config>` prompt as shown:

```
*status
*talk 6
Gateway user configuration
Config>set data-link frame-relay interface#
Config>network interface#
FR Config>
```

If the `Config>` prompt does not appear, press ↵ again.

To return to the `*` prompt, press Ctrl p.

Restarting the Router

When you are done configuring the router, restart it to activate the new configuration. Enter **restart** at the `*` prompt and respond yes to the following prompt:

```
Are you sure you want to restart the gateway? (Yes or No): yes
```

When the new configuration is finished initializing, the terminal displays the `*` prompt.

Monitoring the Router

Enter monitoring commands at the GWCON prompt (+). To enter FR monitoring commands, display the `FR>` prompt as shown below. (Get the network number from the `Config>list` display.)

```
*status
*talk 5

CGW Operator Console
+network interface#
FR>
```

To return to the `*` prompt, press Ctrl p.

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