

Setting PDH Receive Parameters

This section describes how to manually set the receive rate, receive level, framing, and test pattern for PDH signals.

Pressing AUTOSCAN sets the receive parameters automatically based on the received signal.

Steps for Setting Parameters

The sequence of steps for setting receive parameters varies with signal to be received. Figure 3 60 shows the sequence of steps required to set the receive parameters for PDH signals (for example, 2 Mb/s).



Figure 3 60: Sequence for Setting PDH Signal Parameters (non demuxed)

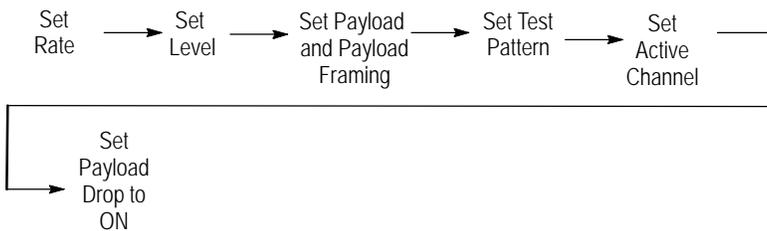


Figure 3 61: Sequence for Setting PDH Signal Parameters When demultiplexing a PDH Signal (demuxed)

CTS850 SDH/PDH Test Set

Selecting 64k RX Settings

If the operator selects a SDH rate with PDH mapping or a PDH Transmit Rate and a 64k payload on the Receive Setting screen, the 64k Rx SETTINGS menu is enabled.

This menu has all of the setup items required to configure a 64k or N x 64k signal, along with duplicates of the framing selections and test pattern choices.

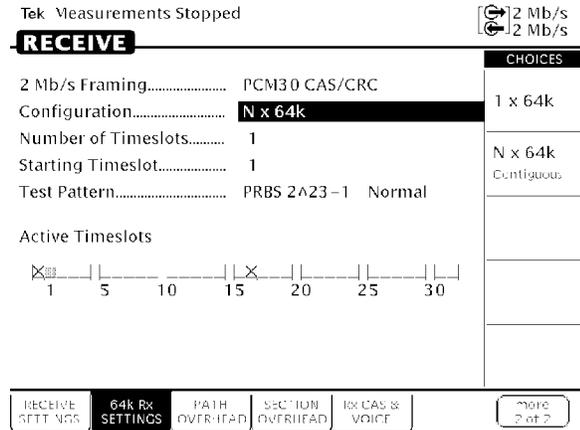


Figure 3 62: 64k Rx SETTINGS from RECEIVE SETTINGS menu

Table 3 22: 64k Rx SETTINGS Choices

64k RX Settings	Choices
Framing	Selects the framing for the underlying 2 Mb/s signal. Choices are 2Mb/s PCM30, PCM31, PCM30CRC, and PCM31CRC.
Configuration	Selects the 64k configuration. The menu choices are 1x64k, Nx64k Contiguous.
Number of Time-slots	If the configuration is N x 64 k, this selects the number of contiguous channels (N) that make up the signal. This choice will not display for a 64k configuration.

Table 3 22:64k Rx SETTINGS Choices (Cont.)

64k RX Settings	Choices
Starting Timeslot	This selects the starting (or only) timeslot.
Test Pattern	This selection is a duplicate of the Test Pattern selection choice from the RECEIVE SETTING menu.

Setting the Receive Rate

To set the receive rate:

Press Menu Button	Select Menu Page	Highlight Parameter	Select Choice
RECEIVE	RECEIVE SETTINGS (see Figure 3 63)	Receive Rate	<i>as appropriate</i>

- H Select **2 Mb/s**, **8 Mb/s**, **34 Mb/s**, or **140 Mb/s** to receive a PDH signal.
- H If your CTS 850 test set supports the 45 Mb/s option, there is also a **45 Mb/s** signal available for selection.

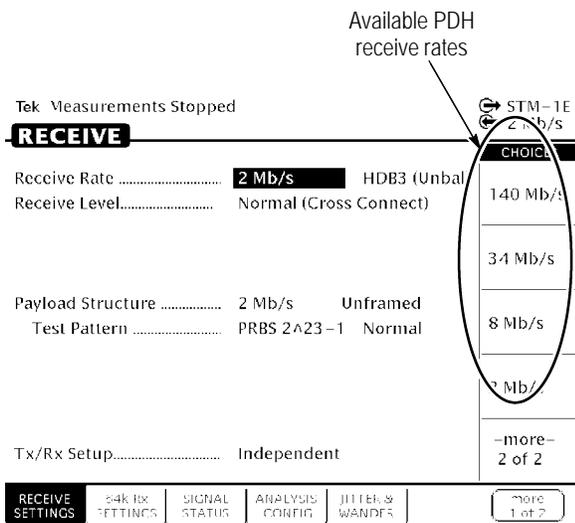


Figure 3 63: PDH Signal Receive Rates

Independent Receive and Transmit Settings

Generally, you can set the receive and transmit settings independently. For example, you can receive an electrical signal at the 34 Mb/s rate while simultaneously transmitting an optical signal at the STM-1 rate.

Coupling Receive and Transmit Settings

If your application requires that the receive settings and transmit settings be identical, you can save time by coupling them together. After they are coupled, any change you make to a parameter on the RECEIVE SETTINGS page will also be made to the corresponding setting in the TRANSMIT SETTINGS page of the RECEIVE menu. The inverse is also true.

To couple the receive and transmit settings together from the RECEIVE SETTINGS page:

Press Menu Button	Select Menu Page	Highlight Parameter	Select Choice
RECEIVE	RECEIVE SETTINGS	Tx/Rx Setup	Coupled

NOTE. When settings are coupled from the RECEIVE SETTINGS page, the transmit parameters are changed to match the receive parameters. Conversely, when settings are coupled from the TRANSMIT SETTINGS page, the receive parameters are changed to match the transmit parameters.

To change receive and transmit settings so that they are no longer coupled:

Press Menu Button	Select Menu Page	Highlight Parameter	Select Choice
RECEIVE	RECEIVE SETTINGS	Tx/Rx Setup	Independent

Notice that the signal status icons, in the upper-right corner of the display, changed to indicate that the settings are no longer coupled.

Setting the Receive Level

For PDH Receive Parameters, specify the receive level for electrical signals:

Press Menu Button	Select Menu Page	Highlight Parameter	Select Choice
RECEIVE	RECEIVE SETTINGS	Receive Level	Normal
			Monitor 20db
			Monitor 30db

Setting Payload and Payload Framing

When receiving a PDH signal you can specify payload and payload framing of the signal.

To specify the framing of a received PDH signal:

Press Menu Button	Select Menu Page	Highlight Parameter	Select Choice
RECEIVE	RECEIVE SETTINGS	Payload and Payload Framing	<i>as appropriate</i>

NOTE. The choices available for Framing depend on the selected Receive Rate.

- H Select **2 Mb/s Unframed** to receive an unframed 2 Mb/s signal.
- H Select **2 Mb/s PCM30 CAS** to receive a framed, 30 channel 2 Mb/s signal with Channel Associated Signalling in Timeslot 16.

- H Select **2 Mb/s PCM31** to receive a framed, 31 channel 2 Mb/s signal.
- H Select **2 Mb/s PCM30 CRC/CAS** to receive a framed, 30 channel 2 Mb/s signal with Channel Associated Signalling in Timeslot 16 with CRC4 multiframe.
- H Select **2 Mb/s PCM31 CRC** to receive a framed, 31 channel 2 Mb/s signal with CRC4 multiframe.
- H Select **8 Mb/s Unframed** to receive a unframed 34 Mb/s signal.
- H Select **8 Mb/s Framed** to receive a framed 34 Mb/s signal.
- H Select **34 Mb/s Unframed** to receive an unframed 34 Mb/s signal.
- H Select **34 Mb/s Framed** to receive a framed 34 Mb/s signal.
- H Select **140 Mb/s Unframed** to receive an unframed 140 Mb/s signal.
- H Select **140 Mb/s Framed** to receive a framed 140 Mb/s signal.
- H Select **64k PCM30 CAS/CRC, 64k PCM31 CRC, 64k PCM30 CAS, or 64k PCM31.**

Specifying the Test Pattern

To specify the test pattern of the received signal:

Press Menu Button	Select Menu Page	Highlight Parameter	Select Choice
RECEIVE	RECEIVE SETTINGS	Test Pattern	<i>as appropriate</i>

NOTE. The choices available for Test Pattern depend on the selected Receive Rate.

- H Select **1 in 8** to set the test pattern to 1000 0000.
- H Select **User Word 8 bit**, **User Word 16 bit**, or **User Word 24 bit** to set a test pattern different from the preset choices. If you choose User Word, the test pattern description changes to User Defined Byte.
- H Select **Unknown** when you do not know what test pattern is being transmitted or when the test pattern is not stable.

If you select User Word for the test pattern, set the value of the User Word as follows:

1. Select the line containing the byte to set the value of the User Defined Byte.
2. Define the contents of the User Defined Byte as follows:

Press Menu Button	Select Menu Page	Highlight Parameter	Select Choice
		<i>select displayed byte</i>	Set to 00000000
			Set to 11111111
			Default 10101010
			EDIT BYTE

- H Select **Set to 00000000** to set the test pattern to all zeros.
 - H Select **Set to 11111111** to set the test pattern to all ones.
 - H Select **Default 10101010** to set the test pattern to alternating ones and zeros
3. Select **EDIT BYTE** to specify a value different from the preset choices.
 4. Select **DONE** when you are finished editing the byte.

Specifying the Payload Drop

If the Receive rate is any PDH or SDH rate, SDH is mapped for PDH, and the PDH payload is less than the line rate, then a selection appears at the bottom of Receive, Receive Settings menu. This selection permits the operator to drop a certain PDH payload. 8 Mb/s and 64k rates can not be dropped.

Table 3 23:RX CAS & Voice Choices

Rx CAS & Voice	Choices
CAS Display Mode	The operator can select SINGLE mode, which selects a single timeslot and enables the speaker drop.
Selected Timeslot	In Single display mode, this permits selection of the timeslot of interest. This selection is not displayed in scan mode.
Speaker	In Single Display mode, the operator may drop the selected timeslot to the internal speaker. This field permits selection of OFF, LOW, MEDIUM, and LOUD volumes. Once enabled, the speaker drop will remain on until disabled from this screen, or the payload is changed for 64k.

Setting Jitter Receive Parameters

You can set the CTS850 to measure jitter or wander in PDH signals. Refer to *Setting Jitter Receive Parameters* in the separate section of this chapter on **Setting Jitter/Wander Parameters** for information about this topic.

