PRELIMINARY

DALLAS
SEMICONDUCTOR

Application Note 336
DS2151, DS2153 Programming,
Transparent Operation

The DS2151 and DS2153 can operate in a transparent mode in both the receive and transmit directions. In this mode the transmitter will not alter the data presented at TSER. In this mode, the transmitter will not insert framing, signaling, or other signals such as CRC or FDL. Generally, the receive side of the DS2151 or DS2153 is always transparent. Data received at RTIP and RRING is passed through intact to RSER. In the DS2151 the Receive Mark Register can be programmed to insert 7Fh or digital milliwatt code into any channel or group of channels on the receive side.

TRANSPARENCY CONFIGURATIONS
DS2151:

Hardware considerations:	TSER and TLINK must be tied together either logically or physically.
Register configurations:	TCR1.2, TCR1.5, TCR1.6 = 1
	TCR1.0, TCR1.1, TCR1.4 = 0
	TCR2.0 = 0

DS2153:

Hardware considerations:	Need rev A5 or better for complete receive transparency with elastic store enabled.
Register configurations:	TCR1.6 = 1
	TCR1.2, TCR1.3, TCR1.4, TCR1.5 = 0
	CCR1.4 = 0
	CCR2.3, CCR2.4, CCR2.5 = 0
	TCR2.1, TCR2.2, TCR2.3, TCR2.4, TCR2.5, TCR2.6, TCR2.7 = 0
	RCR2.1 = 0 (required on rev A2 devices only)