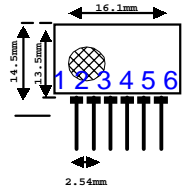


TWS-434 TRANSMITTER

NEW!



pin 1 : Vcc
pin 2 : Vcc
pin 3 : Gnd
pin 4 : Gnd
pin 5 : RF Output
pin 6 : Code Input

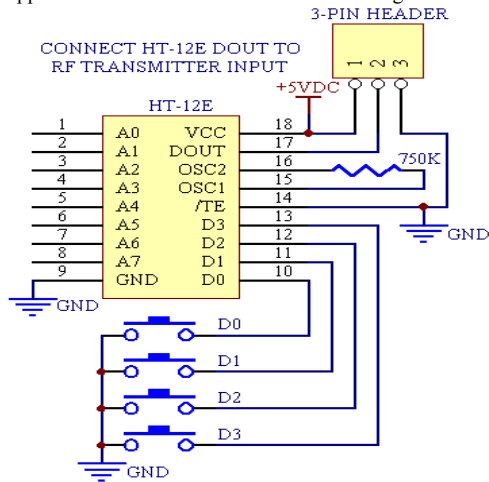
Frequency 300 - 433MHz

Modulation : AM (Code)
Supply Voltage : 1.5v - 12 v dc
RF Output Power : 8mW

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
Vcc	Operating supply voltage		1.5	-	12	V
Icc	Peak Current		-	5	9	mA
Vin	Input High Voltage	IData=100Ua (High)	Vcc-0.5	-	Vcc	V
Vii	Input Low Voltage	IData=0Ua (Low)	-	-	0.3	V
Fo	Absolute Frequency		314.8	315	433.9	MHz
Po	RF Out Power Into 50Ω		-3	0	+2	dBm
Tr	Modulation Rise Time	External Encoding	-	5	-	KHz
Tf	Modulation Fall Time		-	-	100	uS
			-	-	100	uS

Notes : (Case Temperature = +25C+/-2C Test Load Impedance = 50 Ω)

Application Circuit: 4-bit RF transmitter using the Holtek HT-12E encoder



Connections:

1. TWS Gnd to header-pin #3.
2. TWS Vcc to header-pin #1.
3. TWS Code-Input to header-pin #2.

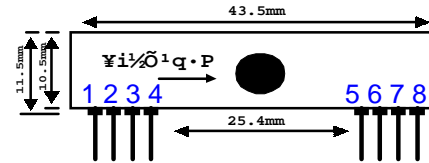
NOTE: /TE can be switched to ground to provide transmit on button-press.

More detailed information is available from <http://www.rentron.com>

For 8-bit RF remote control substitute the HT-12E with HT-640 encoder.

Maximum range obtained with 50-ohm antenna, 35cm in length on TWS & RWS.

RWS-434 RECEIVER



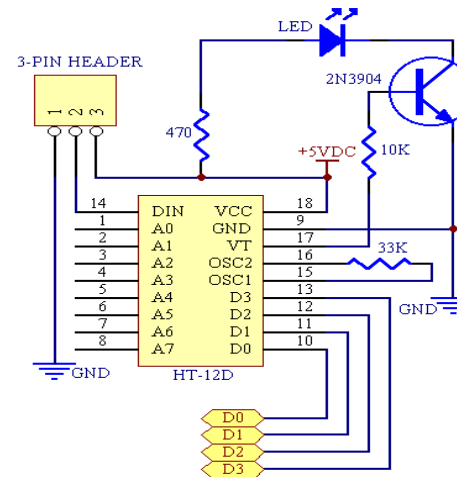
pin 1 : Gnd
pin 2 : Digital Output
pin 3 : Linear Output
pin 4 : Vcc
pin 5 : Vcc
pin 6 : Gnd
pin 7 : Gnd
pin 8 : Ant (About 30 - 35 cm)

Frequency 300 - 433MHz

Modulation : AM
Supply Voltage : 4.5v - 5.5 v dc
Sensitivity : 3uVrms
Output : Digital & Linear
Application : Radio Remote Control

ITot	Operating supply voltage		-	4.5	-	
V Data	Data Out	Data = +200 uA (High)I	Vcc-0.5	-	Vcc	V
		I Data = -10 uA (Low)	-	-	0.3	V
Electrical Characteristics						
Characteristics	SYM	Min	Typ	Max	Unit	
Operation Radio Frequency	FC	300 - 434			MHz	
Sensitivity	Pref			-106	dBm	
Channel Width		+-500			KHz	
Noise equivalent BW	NEB		5	4	KHz	
Baseboard data rate				3	Kb/s	

Application Circuit: 4-bit RF Receiver using the Holtek HT-12D decoder



Connections:

1. RWS Gnd to header-pin #1
2. RWS Vcc to header-pin #3
3. RWS Digital-Output to header-pin #2

HT-12E encoder data transfers to HT-12D data-pins via RF transmission.

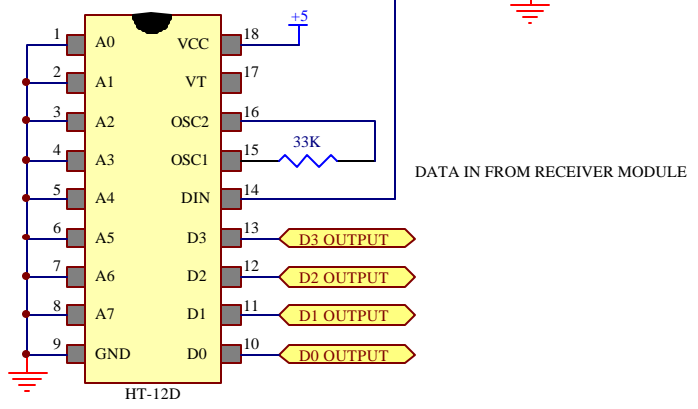
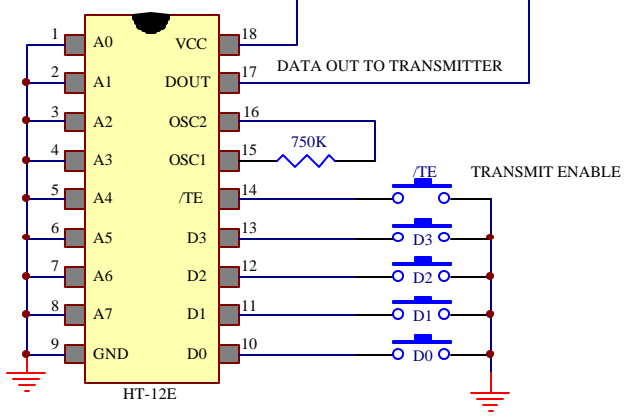
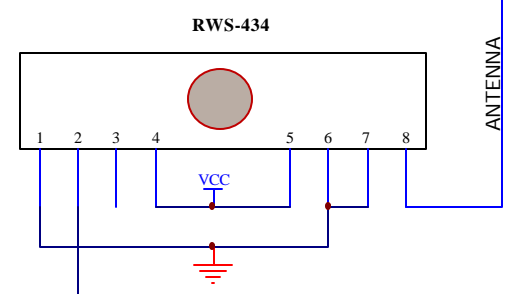
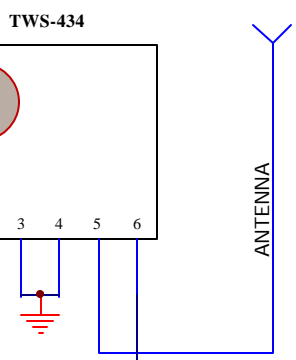
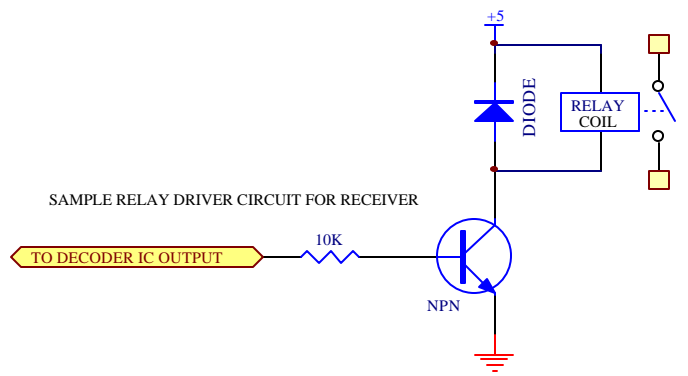
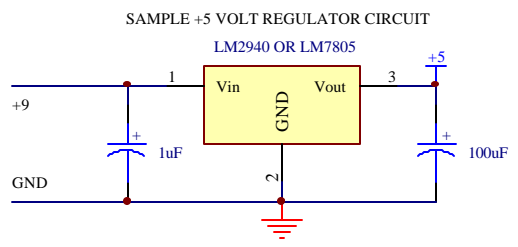
VT-pin transitions from low to high on valid reception & address.

More detailed information is available from <http://www.rentron.com>

For 8-bit RF remote control, substitute the HT-12D with HT-648L decoder.

Reynolds Electronics

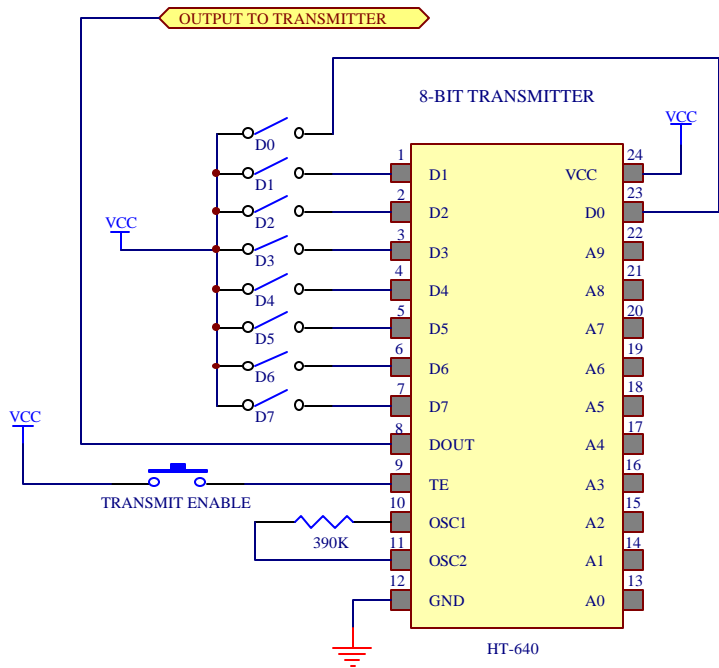
3101 Eastridge Lane Canon City, Co. 81212 <http://www.rentron.com>
Tel: (719) 269-3469 Fax: (719) 276-2853 e-mail: webmaster@rentron.com



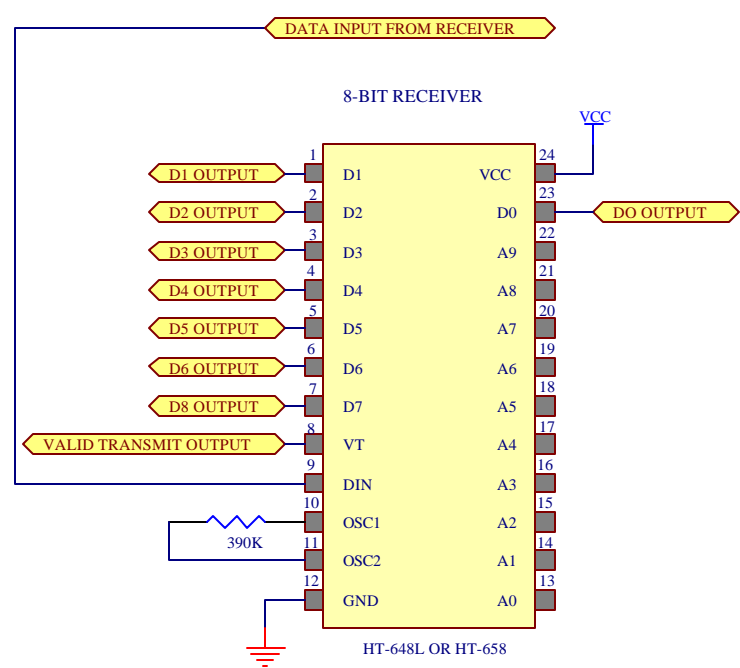
Title		
Size	Number	Revision
Orcad A		
Date:	12-Jun-2001	Sheet of
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ENCODER AND DECODER ADDRESS PINS MUST BE AT THE EXACT SAME LOGIC LEVELS FOR THE ENCODER TO CONTROL THE DECODER
 THIS ALLOWS A SINGLE TRANSMITTER TO CONTROL MULTIPLE RECEIVERS BY MANIPULATING THE ADDRESS PINS OF THE ENCODER IC TO MATCH THAT OF MULTIPLE RECEIVER DECODER ICs

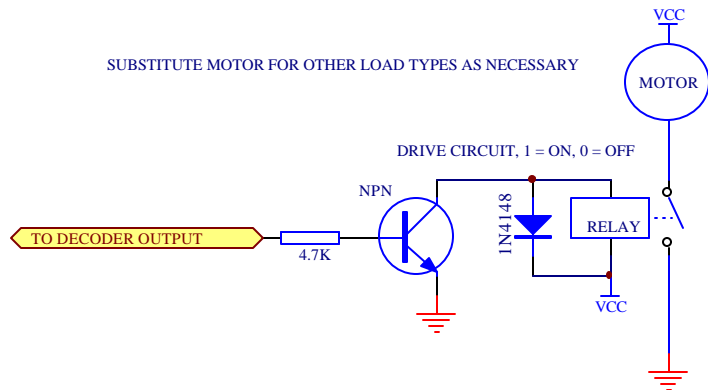
CONNECT OUTPUT FROM ENCODER IC TO INPUT OF TRANSMITTER



CONNECT OUTPUT FROM RECEIVER TO INPUT OF DECODER IC



SUBSTITUTE MOTOR FOR OTHER LOAD TYPES AS NECESSARY



Title		
8-Bit Encoder/Decoder Circuits		
Size	Number	Revision
Orcad A		
Date:	12-Jun-2001	Sheet of
File:	C:\CAD\SCHEMATICS.Ddb	Drawn By: