

**800 / 1900 MHZ DUAL BAND LINEAR RF COMPENSATOR  
MODEL # SYN9528A  
USER MANUAL**

## 1. GENERAL

The 800 / 1900 MHz Dual Band Linear RF Compensator model # SYN9528A is a bi-directional, dual band RF amplifier used in conjunction with either a dual band or a standard single band mobile phone. It's designed to compensate for signal attenuation in both transmit and receive paths due to antenna and cable losses employed in automotive OEM installations. This helps improving call quality in weak coverage areas and reduce dropped calls in between cell sites. The compensator operates in both analog (AMPS) and digital (CDMA, GSM, TDMA) modes.

## 2. INSTALLATION

To meet the FCC's and IC's RF Exposure Guidelines, the antenna should be installed so there is at least 20 cm of separation between the body of the user or nearby persons and the antenna.

### WARNING

All installations are done at the factory. No end-user installation or accessible part is involved. Any unauthorized changes or modifications not expressly approved by the party responsible for compliance could void user's authority to operate this equipment.

## 3. I/O CONNECTION

PORTABLE and ANTENNA port: FAKRA RF type connectors.

DC input and ON/OFF control: 4-pin automotive connector.

## 4. SPECIFICATIONS

FCC ID	IHDA56CK1
FCC Rule Parts	22 & 24
IC Certification Number	1090-SYN9528
IC Radio Standards Specification	RSS-131
Emission Designators	DXW, F1D, F9W and GXW
Operating Frequency	TX: 824-849 MHz 1850-1910 MHz RX: 869-894 MHz 1930-1990 MHz
Mode of Transmission	Analog & Digital
Data Source	External

Type of Modulation	AMPS (analog) CDMA, GSM & TDMA (digital)
Type of Information	Telephony & Data
Channeling	Single channel
Channel Spacing	AMPS: 30 KHz CDMA: 1.23 MHz GSM: 300 KHz TDMA: 30 KHz
Input Power	TX: 25 dBm max (800 MHz) 20 dBm max (1900 MHz)
Output Power	TX: AMPS: 27 dBm CDMA: 27 dBm TDMA: 27 dBm GSM: 800 MHz: 29 dBm 1900 MHz: 30 dBm
Nominal Gain	Cellular: TX: 824-849 MHz: 9 dBm RX: 869-894 MHz: 7.5 dBm PCS: TX: 1850-1910 MHz: 15 dBm RX: 1930-1990 MHz: 15 dBm
Input and Output Impedance	50 Ohm
Harmonics & Spurious	IC, FCC, TIA / EIA specifications
Stability	Any RF load condition
DC Supply Voltage	9 to 16.5 V
Current Draw	1.5A max
RF Load VSWR	Full power at better than 2:1 VSWR
Operating Temp:	-30 to 60°C
Storage Temp	-40 to 90°C

