

AURAL REMOTE PICKUP LINKAPPLICATION INFORMATION

The Moseley Associates RPL-3/RPL-4 Remote Pickup Links are designed to provide a high-quality program link between an outside or remote broadcast location and the broadcast studio. The RPL-3 operates in the 148-174 MHz band and the RPL-4 in the 450-470 MHz band. Both units are designed for two-channel operation with one set of crystals provided with the links. A second set of crystals is optionally available.

The RPL-3/RPL-4 Systems consist of a transmitter and a receiver. The transmitter is designed to operate continuously from 120/240 VAC, 50-60 Hz and from 13.5 VDC negative ground. It is supplied with an AC power cord and a DC cable connector.

For applications requiring higher RF output, the Moseley Associates AMP-3 RF Power Amplifier may be used in conjunction with the RPL-3 transmitter. The AMP-3 provides a 6 dB power gain. With a 10-watt input, the AMP-3 typically will yield a 40-watt RF output. The AMP-4, used in conjunction with the RPL-4 transmitter, provides a 5 dB power gain. The AMP-4 has a typical output of 30 watts.

Moseley Associates Remote Pickup Links and RF Amplifiers have many applications, as is shown in the attached block diagrams. The RPL-3/RPL-4 Remote Pickup Links can be used in several configurations, as shown in the attached drawings and specifications. Enclosed with this brochure are data and prices on antennas for mobile and fixed systems. Antennas for mobile use typically exhibit a gain of 2.5 dBi. Antennas for fixed applications can be either directional or omnidirectional. These antennas provide gains of up to 13.0 dBi at 150 MHz and 17.0 dBi at 450 MHz. The type of antennas selected would obviously vary according to the specific application and the terrain factors involved. Our Marketing Department will be happy to assist you in selecting the proper antennas for your specific installation.

Figure 1, attached, shows a mobile unit with direct communications to the studio. The automobile can be equipped with an RPL-3 or RPL-4 transmitter and the optional AMP-3 or AMP-4 RF Amplifier. Although not shown in this drawing, additional audio sources besides the microphone shown may be fed to the transmitter. Portable tape cas-

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ettes or reel-to-reel machines can be fed into the high-level line input. With this input location near the front of the transmitter the tape recorder can be maintained as a truly portable unit. The mobile studio shown in Figure 2 is built within a trailer and provides full production facilities. The unit, as depicted in the drawing, is equipped with the RPL-3 or RPL-4 transmitter and includes the optional RF amplifier.

These systems are licensed under Part 74, Subpart D of the Commission's Rules and Regulations. Such systems can be licensed whether telephone land line service is or is not available. The systems shown are just some of the possible configurations. Systems have been used from helicopters, airplanes, blimps, boats, and even atop flag poles. Our Engineering and Marketing Departments will be pleased to assist in designing a system to meet your exact needs.

Rev. 7/75

MOSELEY ASSOCIATES, INC.

RPL-3/RPL-4 ANTENNAS, TRANSMISSION LINE, AND CONNECTORS

RPL-3 ANTENNAS (150 MHz)

DIRECTIONAL

<u>Manufacturer</u>	<u>Model</u>	<u>Description</u>	<u>Price</u>
Scala	CA5-150H	5-Element Yagi, 9 dBd gain, horizontally polarized, Type N Female Connector.	\$ 95.00
Scala	CA5-150V	Same as above, but vertically polarized.	125.00
Scala	2CA5-150H	Two CA5-150H's stacked, 11.5 dBd gain, horizontally polarized. Type N Female Connector.	240.00
Scala	2CA5-150V	Two CA5-150V's stacked, 11.5 dBd gain, vertically polarized. Type N Female Connector.	290.00
DB Products	DB-230	3-Element Yagi, 7 dBd gain, vertically polarized, 144-174 MHz, captive Type N Male Connector.	96.00
DB Products	DE-230-2	Two DB-230's stacked, 10 dBd gain, 144-174 MHz, captive Type N Male Connector.	226.00
DB Products	DB-230-4	Four DB-230's stacked, 13 dBd gain, 144-174 MHz, captive Type N Male Connector.	490.00
DB Products	DB-222E	Vertical Collinear, Cardioid Pattern, 6 dBd gain. NOTE: DB-5001 Side Mount Kit required for mounting on side of tower, \$58.00 Captive Type N Male Connector.	98.00
DB Products	DB-224E	Vertical Collinear, Cardioid Pattern, 9 dBd gain. NOTE: DB-5001 Side Mount Kit required for mounting on side of tower, \$58.00 Captive Type N Male Connector.	206.00
DB Products	DB-228E	Vertical Collinear, Cardioid Pattern, similar to above, more elements, 12 dBd gain. Captive Type N Male Connector.	588.00
<u>OMNI-BASE</u>			
RPL-3 ANTENNAS (150 MHz)			
Scala	OG-4	Vertical Collinear, 4 dBd gain, Type N or VHF Connector. State Center Frequency.	188.00
Scala	GP-150C	Ground Plane, anodized aluminum, cardioid pattern, Type N or UHF Connector.	125.00

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<u>Manufacturer</u>	<u>Model</u>	<u>Description</u>	<u>Price</u>
		<u>RPL-3 ANTENNAS (150 MHz)</u>	
		<u>OMNI - BASE (continued)</u>	
DB Products	DB-222	Vertical Collinear, 4 dBd gain. NOTE: DB-5001 Side Mount Kit required for mounting on side of tower, \$58.00. Captive Type N Male Connector.	\$ 98.00
DB Products	DB-224	Similar to above, more elements, 6 dBd gain. NOTE: DB-5001 Side Mount Kit required for mounting on side of tower, \$58.00. Captive Type N Male Connector.	206.00
DB Products	DB-228	Similar to above, more elements, 9 dBd gain. Captive Type N Male Connector.	588.00
		<u>RPL-3 ANTENNAS (150 MHz)</u>	
		<u>MOBILE</u>	
DB Products	DB-702	5/8 Wave Whip, with mounting base, 15 ft. RG-8/U and PL-259 Male Connector, 2.5 dBd gain.	25.00
Phelps Dodge	251-509	5/8 Wave Length, Cowl or Fender Mounting, 2.5 dBd gain, UHF Male Connector.	21.50
		<u>RPL-4 ANTENNAS (450 MHz)</u>	
		<u>DIRECTIONAL</u>	
Scala	PR-450U	Paraflector, 17.4 dBi gain at 450 MHz, universal mounting for horizontal or vertical polarization, fully anodized, Type N female termination.	350.00
Scala	CA5-450	5-Element Yagi, 10 dBd gain, vertical or horizontal polarization, field changeable, Type N Connector, Female.	95.00
Scala	2CA5-450	Two CA5-450's stacked, 12.5 dBd gain, Type N Female Connector.	250.00
DB Products	DB-436	6-Element Yagi, 10 dBd gain, vertical or horizontal polarization, captive Type N Male Connector.	84.00
DB Products	DB-436-2	Two DB-436's stacked, 13 dBd gain. See DB-5009 Mounting Bracket Assembly for side-by-side configuration. Captive Type N Male Connector.	184.00

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<u>Manufacturer</u>	<u>Model</u>	<u>Description</u>	<u>Price</u>
		<u>RPL-4 ANTENNAS (450 MHZ)</u>	
		<u>DIRECTIONAL (continued)</u>	
DB Products	DB-436-4	Four DB-436's stacked, 16 dBd gain. See DB-5018 Mounting Bracket Assembly for quad configuration. Captive Type N Male Connector.	\$388.00
DB Products	DB-404L	Elliptical Pattern, 5.0 dBd gain. NOTE: DB-5007 Side Mount Kit required for mounting on side of tower, \$48.00. Captive Type N Male Connector.	88.00
DB Products	DB-408L	Elliptical Pattern, 7.8 dBd gain. NOTE: DB-5012 Side Mount Kit required for mounting on side of tower, \$58.00. Captive Type N Male Connector.	168.00
DB Products	DB-410L	Elliptical Pattern, 10.4 dBd gain. NOTE: DB-5012 Side Mount Kit required for mounting on side of tower, \$58.00. Captive Type N Male Connector.	270.00
		<u>RPL-4 ANTENNAS (450 MHZ)</u>	
		<u>OMNI - BASE</u>	
Scala	OG-6	Vertical Collinear, 6 dBd gain, Type N Connector.	188.00
DB Products	DB-404	Vertical Collinear, 3.5 dBd gain. NOTE: DB-5007 Side Mount Kit required for mounting on side of tower, \$48.00. Captive Type N Male Connector.	88.00
DB Products	DB-408	Same as above, more elements, 6.6 dBd gain. NOTE: DB-5012 Side Mount Kit required for mounting on side of tower, \$58.00. Captive Type N Male Connector.	168.00
DB Products	DB-410	Same as above, more elements, 9.2 dBd gain. NOTE: DB-5012 Side Mount Kit required for mounting on side of tower, \$58.00. Captive Type N Male Connector.	270.00
DB Products	DB-416	Fiberglass enclosed collinear, 6 dBd gain, Type N Male or Female Connector.	168.00

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<u>Manufacturer</u>	<u>Model</u>	<u>Description</u>	<u>Price</u>
		<u>RPL-4 ANTENNAS (450 MHz)</u>	
		<u>MOBILE</u>	
DB Products	DB-705	Center-loaded Whip, with mounting base, 15 ft. RG-58C/U and PL-259 Male Connector, 5 dBd gain.	\$ 23.00
DB Products	DB-2057	Low-loss Cable with PL-258, increases gain of DB-705 to 6.4 dBd. (May be ordered as DB-705/2057 for \$32.00)	14.00
Phelps Dodge	681-509	Collinear Roof Top Vehicular Antenna, 5.2 dBd gain. Supplied with 15 feet of RG-58A/U and a UHF Male Connector.	17.50

TRANSMISSION LINE AND CONNECTORS

Transmission Line RG-58U Coaxial Cable, jacketed, 50 ohm Attenuation (DB 100') @ 150 MHz, 5.15 dB Attenuation (DB 100') @ 450 MHz, 9.5 dB \$0.13/ft.

<u>Connectors:</u>	<u>Male</u>	<u>Female</u>	
RG-58U Coax	BNC-UG58A/U	UG89U	1.92
	UHF-PL-259/UG175U		1.76
	N - UG536 B/U	UG556B/U	4.15

TRANSMISSION LINE AND CONNECTORS

Transmission Line RG-8U (8214) Coaxial Cable, jacketed, 50 ohm \$0.30/ft.
 Attenuation (DB 100') @ 150 MHz, 2.2 dB
 Attenuation (DB 100') @ 450 MHz, 3.8 dB

Connectors:

RG-8U Male UHF-PL-259 \$1.40
 N - UG21B/U 1.81

Female

UG23B/U 3.33

Transmission Line FHJ4-50B Heliax, 1/2" Foam, 50 ohm 0.97/ft.
 Attenuation (DB 100') @ 150 MHz, 1.0 dB
 Attenuation (DB 100') @ 450 MHz, 1.85 dB

Connectors:

FHJ4-50B 1/2" Foam Male UHF - 44AP 7.90
 Heliax N - 44AW 9.40

Female

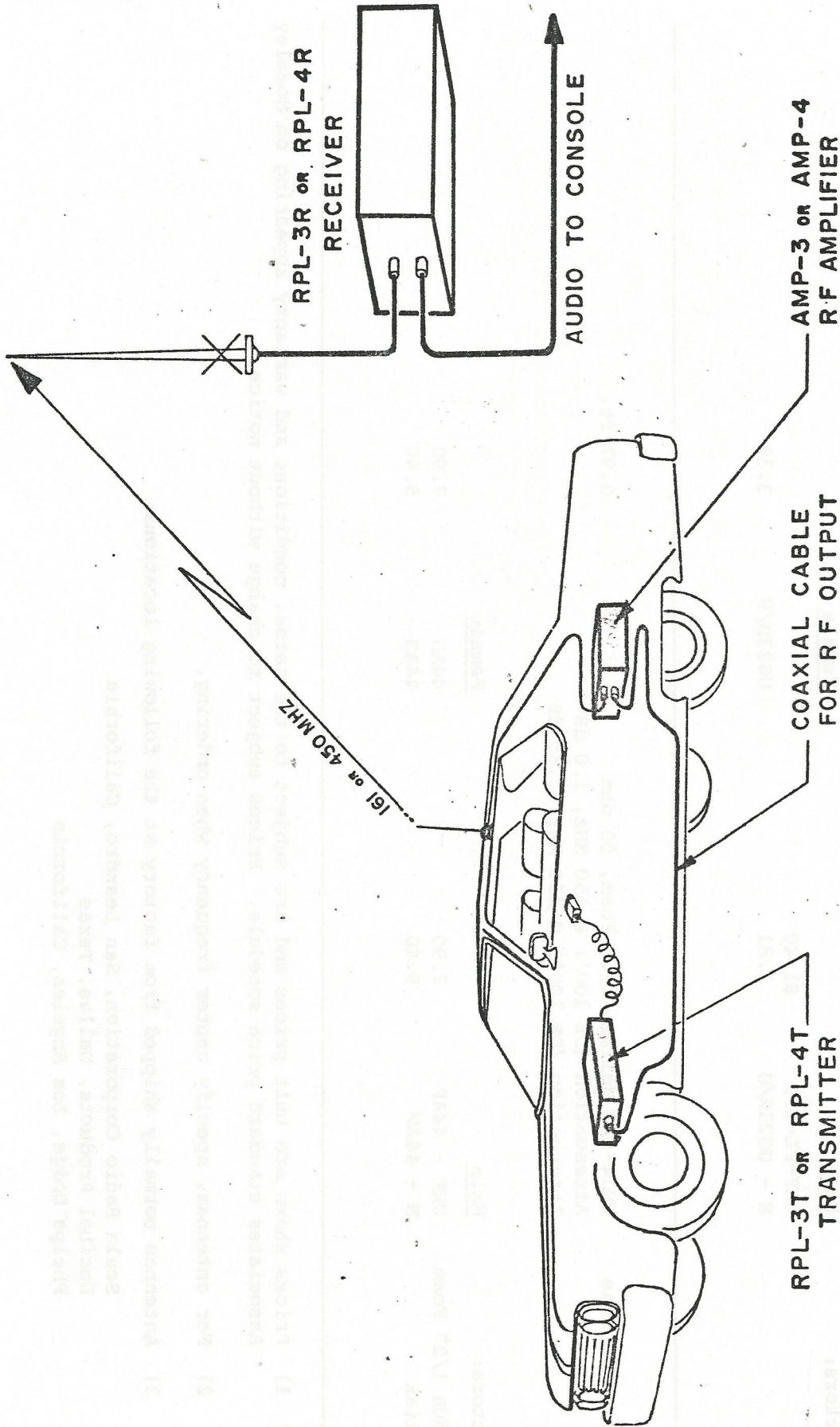
44AU 7.90
 44AN 9.40

NOTES: 1) Prices shown are unit prices and are subject to the terms, conditions and warranty appearing on Moseley Associates standard price schedule. Prices subject to change without notice.

2) For antennas, specify center frequency when ordering.

3) Antennas normally shipped from factory at the following locations:

- Scala Radio Corporation, San Leandro, California
- Decibel Products, Dallas, Texas
- Phelps Dodge, Los Angeles, California

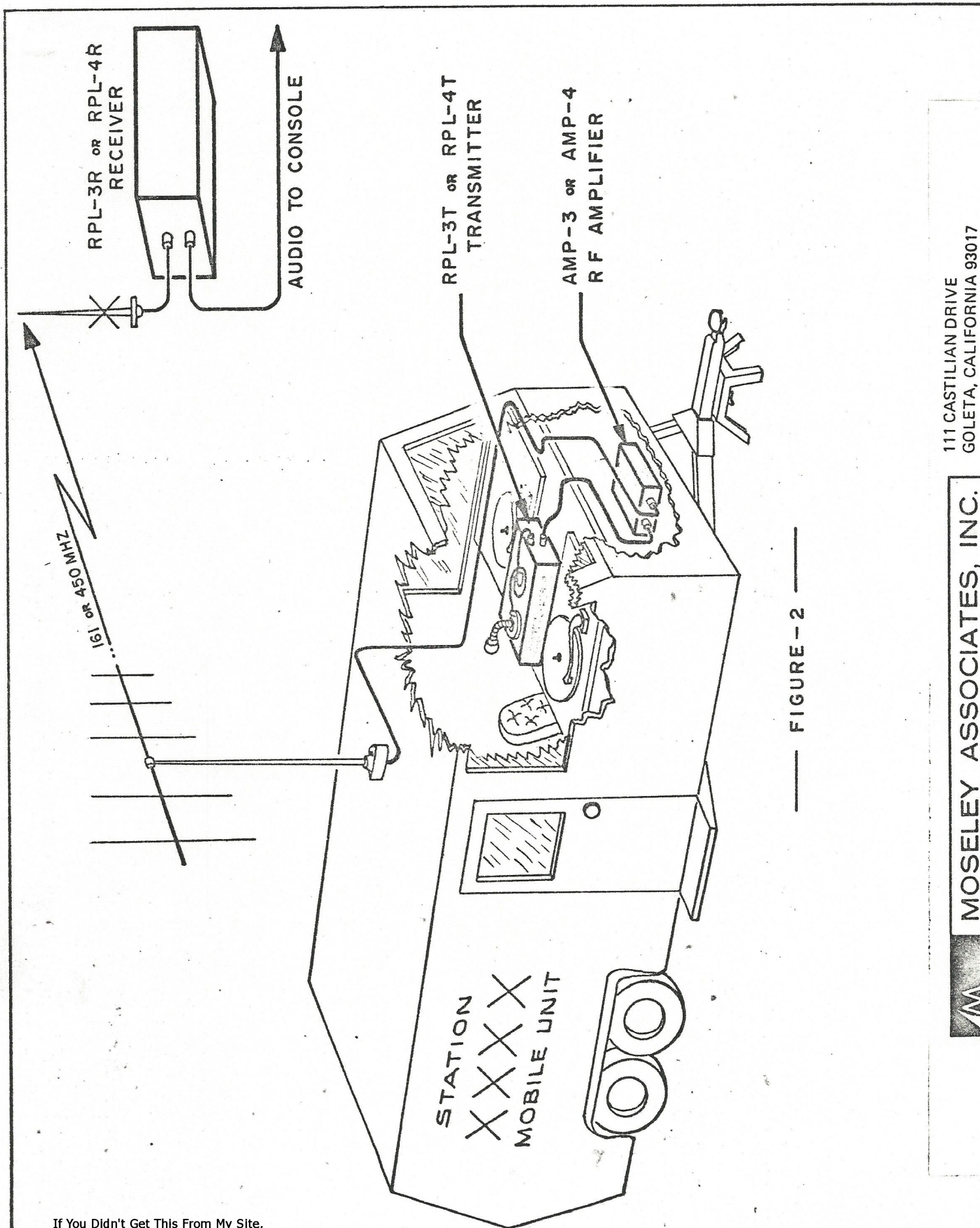


— FIGURE - 1 —

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