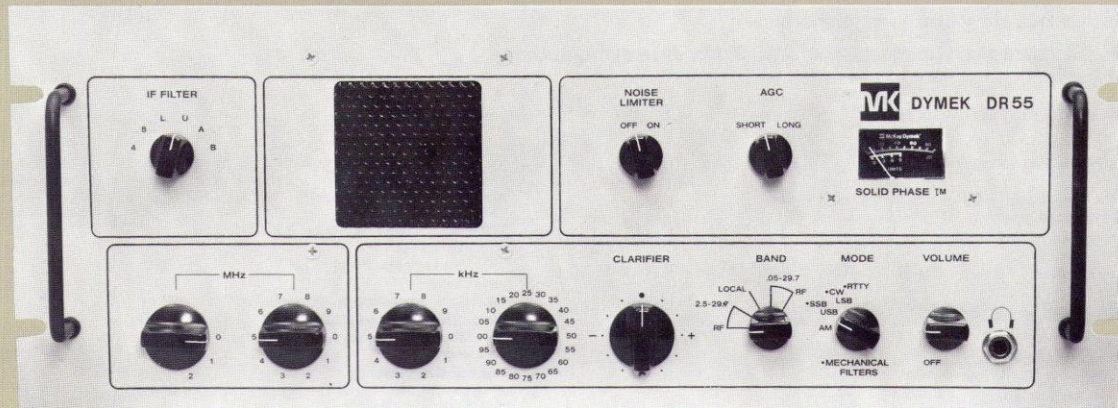


DR 55 Communications Receiver



www.radiopharos.it

The DR 55 is a highly functional, cost effective receiver designed with the commercial, industrial, marine and military user in mind. Full operational capability has been included emphasizing maximum performance versus cost relationship.


All necessary reception facilities are included in the DR 55. LED readouts have been eliminated resulting in a twofold savings in the areas of decreased heat and power consumption and a reduction in manufacturing costs. Optional mechanical filters are available for increased selectivity in the SSB, CW and RTTY modes. AGC speed selection allows a choice of either fast or slow AGC release times for optimum reception during changing signal conditions.

Digital Phase Locked Loop tuning is used allowing frequency changes in a fraction of the time required with a mechanically tuned unit. Once set to frequency, the rotary synthesizer programming switches retain their information during off power periods providing instant on channel reception whenever power is applied. Phase Locked Loop tuning also provides quartz crystal accuracy, stability and

reset ability far superior to most mechanically tuned receivers.

The DR 55 has many uses in the commercial and marine areas. WWV standard time and frequency services can be monitored providing the facility to synchronize clocks and timed events. Frequency counters, oscillators and other time base related measurement devices may be calibrated using WWV and WWVB carrier frequencies and heterodyning techniques. These techniques can easily supply accuracies better than 1 part per million. Facsimile weather maps may be received with excellent results for use as maritime navigation aids.

In many applications, a main receiver is required to be continuously operational. A definite need exists in such installations for a back-up receiver to be used when the main receiver is inoperable and being repaired. The low cost of the DR 55 makes it a very attractive solution to this problem. In marine applications where back-up capability is required, the DR 55 is an inexpensive way to insure reception at all times.

 McKay Dymek®

Your HF Headquarters

DR 55 Communications Receiver

Features

- Full multimode 50 kHz-29.7 MHz continuous coverage for less than you would expect to pay for a single channel, single mode strip receiver
- Class D AM envelope detection for low distortion even at high modulation percentages
- Solid State, Phase Locked Loop, Digital Synthesis tuning
- A High level RF front end using CATV RF power transistors and a double balanced diode ring mixer provides freedom from intermodulation interference and overload, while eliminating the need for a manually adjusted antenna pre-selector in many installations
- Crystal filters in first and second IF amplifiers with ceramic and mechanical filters in third IF
- Unique automatically adjusting threshold noise limiters enhance reception in both AM and SSB-CW-RTTY modes during periods of impulse noise interference
- Standard plug in integrated circuits used for ease of maintenance

Specifications

50 kHz to 29.7 MHz, continuous

AM, Upper Sideband, Lower Sideband, CW, RTTY (with external converter)

Sensitivity 10 dB (S+N)/N

RF Bandwidth	100 kHz	200 kHz	400 kHz	20 MHz	20 MHz	29.7 MHz
4 kHz AM*	10 uV	3 uV	1.0 uV	1.5 uV		
2.2 kHz SSB	2 uV	1.0 uV	5 uV	.75 uV		
400 Hz CW	1 uV	.5 uV	.25 uV	.35 uV		

*30% Modulation

Frequency Readout:

5 Rotary Indicator Switches to 5kHz

Frequency Selection:

10, 1 1 .005 MHz steps 5 kHz Fine Tune

Frequency Stability

at constant ambient of 25°C in any 8 hour period after ½ hour warm up

± 40 Hz

Image Rejection:

70 dB

RF Blocking

Desired signal 60 dB above 1 uV with blocking signal removed 20 kHz and its amplitude adjusted to reduce desired signal by 3 dB

100 dB to 1 uV

Cross Modulation

Desired signal at 60 dB above 1 uV with undesired signal removed 20 kHz and its amplitude adjusted for cross modulation products 30 dB lower than desired signal

65 dB to 1 uV

Intermodulation

Level of 2 undesired signals 30 kHz from the desired signal to produce the equivalent audio output as desired signal 30 dB above 1 uV

65 dB to 1 uV

RF Bandwidth:

4 kHz	4 kHz -6 dB	10 kHz -60 dB
8 kHz	8 kHz -6 dB	28 kHz -60 dB
(Optional) LSB or USB	300 to 2500 Hz -3 dB	-700 Hz, +3800 Hz -60 dB
(Optional) CW	375 Hz -3 dB	3.5 kHz -60 dB
(Optional) RTTY	1200 Hz -3 dB	8.0 kHz -60 dB

Audio Notch Filter:

5000 Hz greater than 25 dB

Noise Limiter

Automatic threshold peak limiters for AM/SSB-CW-RTTY

Hum and Noise Below Full Output

AM, 1 MHz, 1 mV antenna input, 8 kHz bandwidth, 90% 1 kHz modulation

55 dB

Harmonic Distortion

at tuner output, AM, 1 MHz, 1 kHz modulation, 1 mV antenna input, 8 kHz RF bandwidth

Percent Modulation	Percent T.H.D.
50%	0.6%
80%	1.0%
90%	1.5%

Audio Output:

2 watts at 4 ohms, 1 Vrms at 5000 ohms, internal monitor speaker with external speaker connectors

Power Required:

110-120/220-240 VAC, 50-60 Hz Switch Selectable 30 watts

Dimensions:

19" (48 cm) wide x 7" (18 cm) high x 15" (37 cm) deep

Net Weight: Shipping Weight

16 lbs. (7.3 Kg) 22 lbs. (10 Kg)

Circuit Complement:

38 Integrated Circuits, 16 FETs, 17 Transistors, 54 Diodes

Available Options

DP 4044 RF Preselector

600 Ohm 0 dBm Balanced Audio Output

400 Hz Bandwidth CW Mechanical Filter

1200 Hz Bandwidth RTTY Mechanical Filter

Antenna Reradiation:

-45 dBm maximum (without preselector)

Ambient Operating Temperature:

0 to +50 C

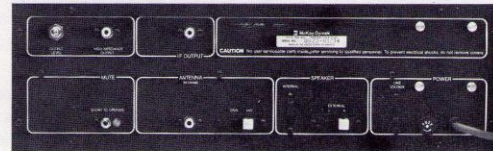
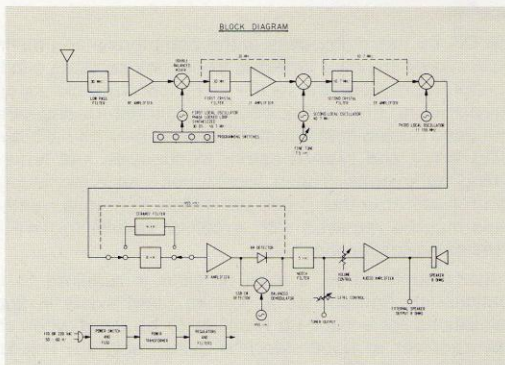
Input Impedance:

50 ohms nominal

BFO Crystal Controlled:

SSB 0 Hz Offset Tuning Offset 2.8 kHz on
 *CW 800 Hz Offset SSB with Ceramic Filters
 RTTY 2000 Hz Offset

*WITH OPTIONAL MECHANICAL FILTERS



Note: Specifications and design subject to possible modification without notice. Copyright © 1975 McKay Dymek Co. Printed in U.S.A.

Limited warranty 1 year parts and labor
 Manufactured in United States of America

A MEMBER OF THE
McKay Dymek Company
 111 So. College Ave.
 P.O. Box 5000
 Claremont, Ca. 91711

Toll free telephone:
Nationwide 800/854-7769
California 800/472-1783
TWX 910-581-4990

www.radiopharos.it