



FEATURES

- Two Display Modes:
 - Four F1-F2 sweeps from four separate tuners
 - Four independent F1-F2 sweeps from a single tuner
- Digital Storage
- Peak Detector detects pulses as narrow as 100 nsec
- Operates with SMR-1629 and SMR-1660 Series Tuners
- On-screen Alphanumerics of frequency limits and auto stop threshold line for instant operator recognition
- Independent Sweep Rates and Variable Decay Times

DESCRIPTION

The SMR-1641 is a high quality, digitally refreshed display designed to be used with the SMR-1600 Microwave Receiving System. It is capable of displaying four high resolution amplitude versus frequency displays of four separate swept tuners or four independent F1-F2 sweeps from a single tuner.

The high resolution digital display is especially effective in locating and identifying signals often missed with analog displays, especially when using a slow scan rate. Each trace has a horizontal resolution of 512 resolution elements and a vertical resolution of 256 resolution elements, providing a crisp, clean trace. A peak detector is also provided to permit pulses as narrow as 100 nsec to be captured on the display.

The digital design provides for a flicker-free readout with independent scan rates optimized for each of the four tuners. Each trace has independent control of the decay rate as well as the ability to "freeze" a display. Frequency limits, channel number, marker frequency and a threshold line are each displayed and updated as the parameters are changed for operator convenience. Auto-stop may be programmed by observing a dotted

line on the SMR-1641 display and adjusting the appropriate controls on the SMR-1611 Controller.

The SMR-1641 is separated in two sections and is connected electrically by multiconductor cables which may be as long as five feet. One section contains the CRT display and controls while the second section contains the power supply, sixteen-bit microprocessor and high speed circuitry. One CRT and one control section may be mounted side-by-side in a standard 19-inch rack, or two displays may be mounted side-by-side to maximize the valuable rack space in front of the operator. The two control sections may be mounted together in a rack away from the operator position in this configuration.

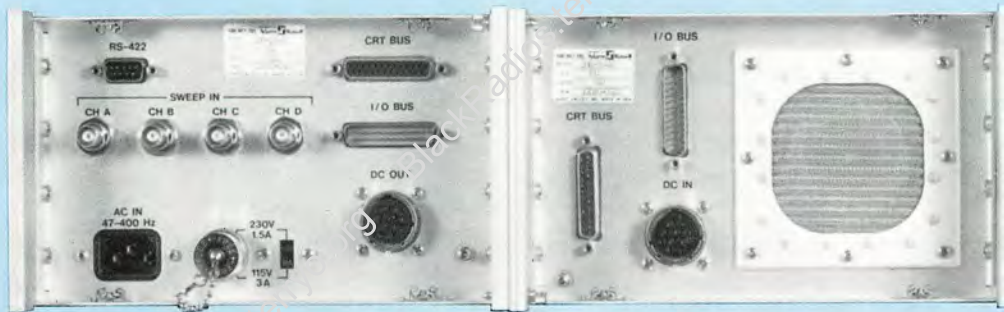
OPERATION

Little or no adjustment of the scan display is required. Two controls are common to all four displays, the "INTENSITY" potentiometer and a "GRATICULE" On/Off pushbutton. In addition, there are "STORE" and "ERASE" pushbuttons for each of the four traces, as well as a "Variable Decay Rate" potentiometer. The decay rate may be varied linearly between no delay and approximately 20 seconds or it may be set to infinite delay at one end of the potentiometer. This allows new signals to be observed at a particular frequency as long as the Variable Decay Rate is in the infinite position.

SERVICEABILITY

The SMR-1641 Digital Scan Display was designed for optimum reliability and serviceability. Extensive use of Built-In-Test (BITE) permits expeditious instrument checkout and provides for easy fault isolation in the event of an instrument failure.

Another built-in feature provides the ability to monitor and log actual operating hours through the resident microprocessor. This permits easy verification of usage and system reliability.



REAR VIEW

SMR-1641 DIGITAL SCAN DISPLAY SPECIFICATIONS

Number of Traces	Four
Display Modes:	
Mode 1:	Four F1-F2 sweeps from four separate tuners
Mode 2:	Four F1-F2 sweeps from one tuner
Horizontal Resolution	512 resolution elements
Vertical Resolution/Trace	256 resolution elements
Serial Interface	RS-422
AM Video Inputs (4)	2 Vp-p into 50 ohms
Peak Detector	100 nsec, minimum, non-repetitive
Temperature	0 to 50° C
Cooling	Forced Air
AC Power	115/230 Vac ± 10%; 47-420 Hz; 150 watts maximum
Size	5" (H) x 17" (W) x 22" (D)
Weight	35 lbs., nominal (Both Units)

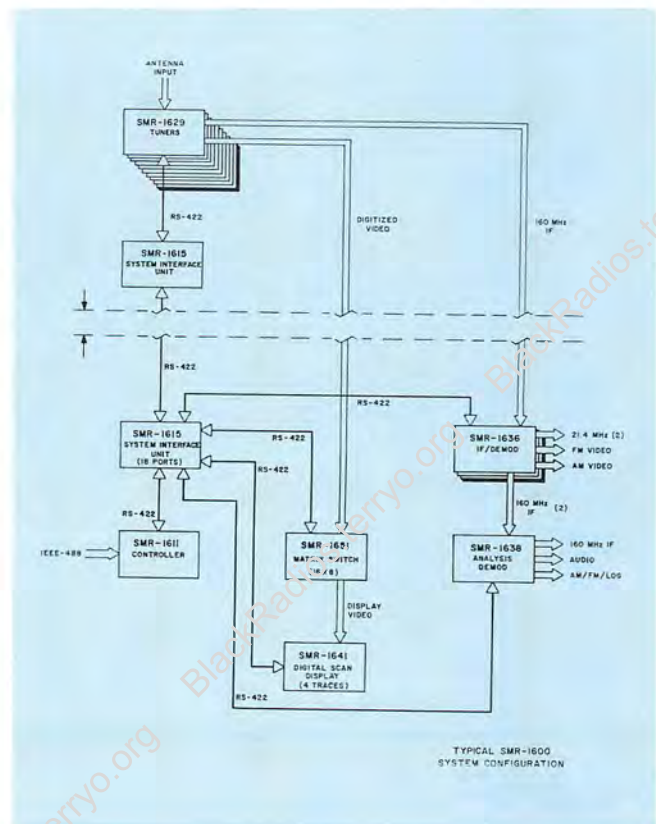
SMR-1600 SYSTEM OVERVIEW

The SMR-1600 Broadband Microwave Receiving System incorporates the latest in technologies to provide previously unavailable performance and flexibility. The SMR-1600 system may include up to seven different instruments, each containing a Motorola 68000 sixteen-bit Microprocessor.

The figure represents a typical SMR-1600 multi-channel receiver configuration. This configuration includes multiple tuners which are located close to the antenna to provide for maximum sensitivity, multiple controllers for multiple users (each having access to the full system) and a variety of demodulation and display capabilities. The system may be expanded to handle up to 64 channels consisting of tuners, demodulators and digital displays.

SMR-1600 FAMILY OF INSTRUMENTS

- SMR-1611 Large Screen Controller
- SMR-1615 System Interface Unit
- SMR-1629 Tuner 100MHz-18 GHz
- SMR-1660 Tuner 0.5-18GHz
- SMR-1635 IF/Demodulator Tray
- SMR-1636 IF/Demodulator Mainframe
- SMR-1638 Analysis Demodulator
- SMR-1641 Digital Scan Display
- SMR-1651 Video Switch Matrix



BlackRadios.terryo.org

WARRANTY

All Micro-tel products are unconditionally warranted for a period of one year except for physical damage, provided the equipment is returned to the plant in Hunt Valley.



10713 Gilroy Road • Hunt Valley, Maryland 21030
(301) 771-0077 FAX: (301) 771-6025