

## **AN/VIC-1(V) Intercommunications and Radio Controls**

The AN/VIC-1(V) intercommunications system provides tactical crew members with facilities for communications with any radio connected to the system, as well as facilities for communicating with each other. It includes the AM-1780/VRC and various intercommunications controls - C-2296, C-2297, and C-2298. The numbers and types of controls are dependent upon the type of vehicle and its operational function.

### **Equipment Check List:**

- 1x AM-1780/VRC Audio Frequency Amplifier;  
Main junction for radio and intercom communications.
- 1x C-2299/VRC Radio Set Control;  
Used for radio rebroadcasting.
- 4x C-2298/VRC Intercommunications Set Control;  
Used as a crewmember control box for the AM-1780
- 1x C-2296/VRC Intercommunication Set;  
Used for outside communications to the radio set and with personnel inside vehicle.
- 1 or 2x C-2742/VRC Frequency Select Control;  
Used for the selection of 10 pre-set radio frequencies.
- 2x MT-1029;  
Trays used for mounting radios.
- 2x MX-6707;  
AMU, used for antennae loading, automatically finds frequency by use of the ant. Control cable hooked up to the radio.

### **Equipment Descriptions**

#### **AM-1780/VRC Audio Frequency Amplifier**

The AM-1780/VRC amplifies the intercom and radio receiver outputs and is the main junction box for a radio installed in a vehicle. It has ten cable receptacles on the top, bottom and sides. Operating controls, and indicator lamp and two pairs of binding posts are on the front.

#### **Technical Specification**

Output Power: 1 watt

Input Channels: 4

Input Impedance

(3 channels) 150 ohms

(1 channel) 5000 ohms

Output Impedance: 100 ohms

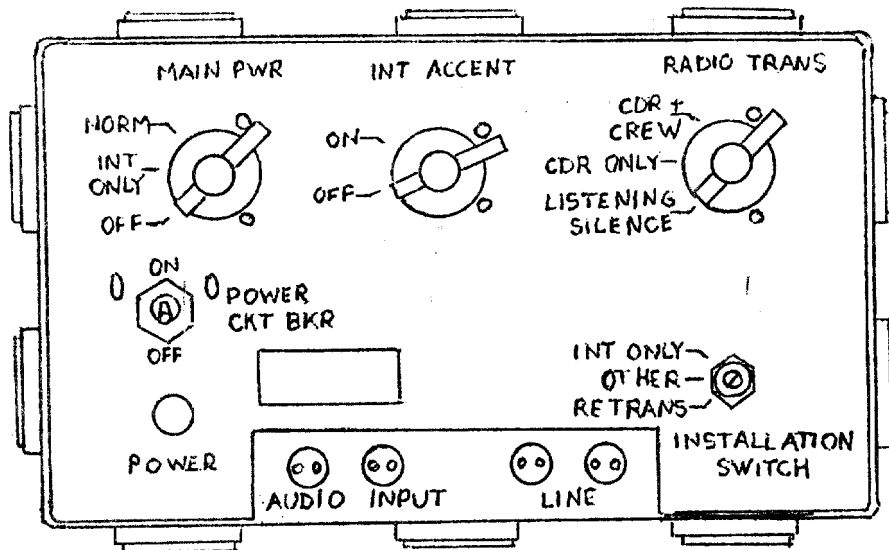
Frequency Response: 300 Hz- 3 KHz +- 4 db

Distortion: 5% max at 600 ohms load

Power Supply: 255 v dc nominal

Temperature Range: -10 to +55 degrees C  
Height: 14.6 cm  
Width: 24.8 cm  
Depth: 9.5 cm  
Weight: 3.6 kg

### AM-1780/VRC Audio Frequency Amplifier



AM-1780/VRC, Main  
Junction Box

#### Description of Picture and Usage

##### Main Power Switch

Three position switch that controls intercom and radio system power.

Off: Turns system power off.

Int Only: Turns on system power for intercom.

Norm: Turns on system power for radio and intercom.

##### Intercom Accent Switch

Adjusts relative loudness of intercom and radio signals

Off: Radio and intercom signals have same loudness.

On: Intercom signals are louder than radio signals.

##### Radio Transmission Switch

Determines which crewmember boxes can control the radios

CDR + CREW: Commander and crew can control radios.

CDR Only: Only commanders box can control radios.

Listening Silence: Neither can talk on radio or intercom system. Radio can only be monitored.

Power Indicator

Indicates Power Circuit (CKT) Breaker (BKR) is ON and power is applied.

Power Circuit Breaker Switch

Controls power to 1780 and provides overload protection.

Audio Input Binding Posts

N/A

Line Binding Posts

Connection for field telephones. Provides communication on intercom system only.

**C-2296/VRC Intercommunication Set Control**

This intercom control is mounted outside the vehicle and provides communications to the radio set in the vehicle and with personnel inside the vehicle.

The control has a handset, H-207/VRC, connected to the case. Operating controls and a pair of binding posts for connecting field telephone lines on the front.

Technical Specification

Height: 9.5 cm

Width: 11.4 cm

Depth: 9.5 cm

Weight

(Incl handset): 2.1 kg

(Excl handset): 1 kg

**C-2296/VRC Intercommunication Set Control**

No Picture Available (Yet)

Description and Usage

Toggle Switch

Selects either intercom or radio.

Rad Trans: Send on radio.

Int: Send on intercom

Volume Knob

Adjusts the relative volume of either the intercom or radio reception.

Line Binding Posts

Connection for field telephones. Provides communication on intercom system only.

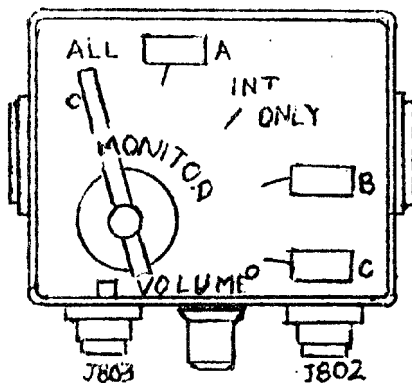
## C-2298/VRC Intercommunication Set Control

The C-2298/VRC provides crew member communications on the radio set in the vehicle. This control unit is usually mounted at the crew members' and commander's position in the vehicle

### Technical Specification

Height: 9.5 cm  
Width: 11.4 cm  
Depth: 12.4 cm  
Weight: 1.2 kg

## C-2298/VRC Intercommunication Set Control



CREWMEMBER CONTROL BOX  
C-2298/VRC

### Description and Usage

#### Monitor Switch

Selects either intercom or radio signal heard and permits control of radio by operator of audio accessory.

ALL: Send and receive on radio and intercom.

A: Send and receive on radio.

INT ONLY: Hear and talk on intercom only.

B: Not used.

C: For operation of radio in "B" tray only.

Note: ALL 2298 boxes must be in the same switch position.

#### Volume Control

Adjust audio output to audio accessory. It will not make microphone input any louder.

## Connectors for C-2298/VRC

- J803: Connection for headset/helmet. Longest or yellow marked cord connects here.  
J802: Connection for headset/helmet. Short cord goes here.

## C-2299/VRC Radio Set Control

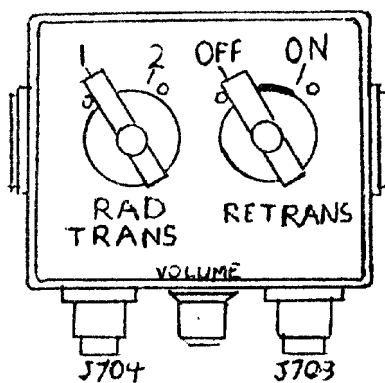
The C-2299/VRC is installed in a vehicle when retransmission facilities are provided.

The C-2299/VRC selects the radio set to be controlled by the audio accessory in the vehicle, provides switch to retransmit mode, and controls audio levels applied to audio accessories.

### Technical Specification

None Available at this time.

## C-2299/VRC Radio Set Control



C-2299/VRC

### Description and Usage

#### RAD TRANS Switch

Selects radio to be controlled by audio accessory.

Position 1: Selects radio in "A" tray.

Position 2: Selects radio in "B" tray.

#### RETRANS Switch

OFF: Radios work independently of each other

ON: Permits automatic passage control and audio signals between radios.

## VOLUME Control

Controls audio output of 2299 through receptacles J703, J704

## Connectors for C-2299/VRC

J703 & J704: Connection for audio accessory to talk, key and listen to radios selected by RAD TRANS switch.

Note: When used with 1780 box, the 2298 will be used for selecting radios.

## Headset/ Helmet

The only additional equipment required for internal communications is the headset/ helmet.

## Operating Instructions for Internal Communications

CAUTION: ALWAYS ENSURE THAT COMMS EQUIPMENT IS SHUT OFF BEFORE STARTING OR STOPPING THE VEHICLE ENGINE...

### AM-1780/VRC

- Step 1. Turn MAIN PWR switch to INT ONLY
- Step 2. Turn PWR CKT BKR to ON
- Step 3. Turn RADIO TRANS switch to CDR + CREW

### C-2298/VRC

- Step 1. Turn MONITOR switch to INT ONLY
- Step 2. Ensure all 2298 boxes are on the same setting

## Headset/ Helmet

- Step 1. Turn ICS box switch to ICS
- Step 2. If you have no communications refer to FAULT FINDING chart

NOTE: IF USING ONLY ONE RADIO IN THE VEHICLE, ENSURE IT IS IN "A" TRAY (LEFT HAND TRAY).