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
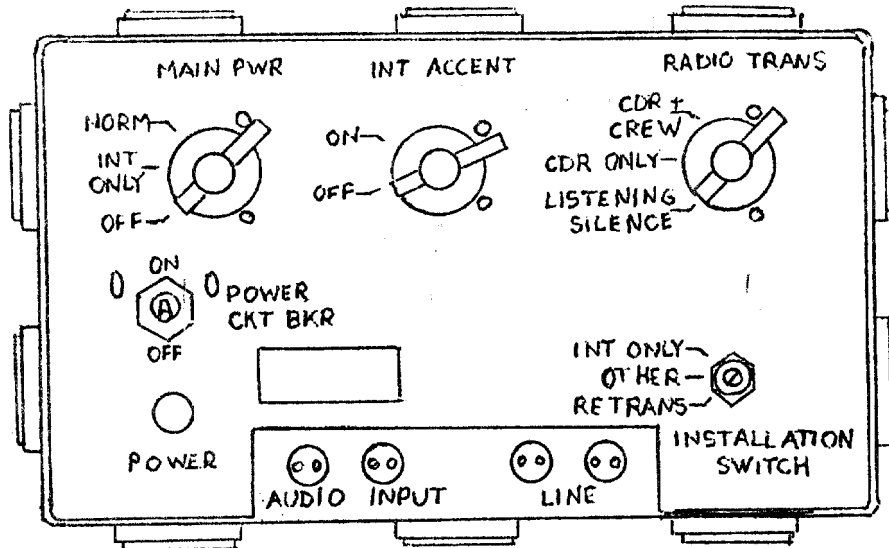Output Impedance: 100 ohms
Frequency Response: 300 Hz- 3 KHz +- 4 db
Distortion: 5% max at 600 ohms load
Power Supply: 255 v dc nominal

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 <u>Power Circuit (CKT) Breaker (BKR)</u> is <u>ON</u> 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.
     <u>Rad Trans</u>: Send on radio.
     <u>Int</u>: 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
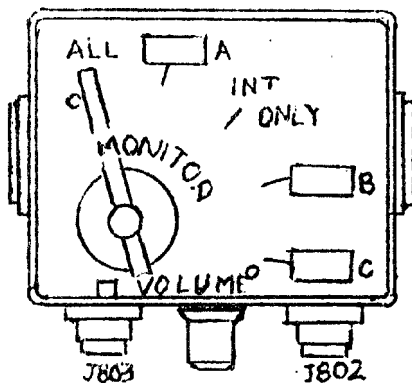   intercom system only.

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-22.98/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.
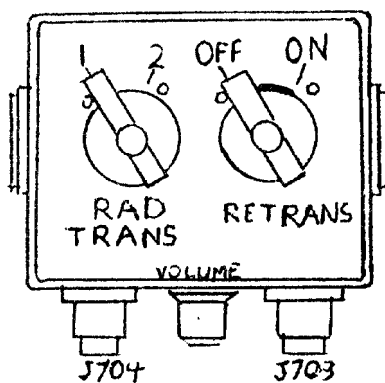
C-2299/VRC Radio Set Control

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

RAD TRANS   RETRANS   VOLUME   J704   J703

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).