

STATION SYSTEMS
INTERPHONE RADIO TRANSFER ARRANGEMENT
FOR USE WITH FAA SMALL KEY SYSTEMS
OR 112 KEY EQUIPMENT

SECTION I - GENERAL DESCRIPTION1. PURPOSE OF CIRCUIT

- 1.01 This drawing is primarily a connection drawing which establishes a standard arrangement for the transfer of a 4-wire radio line from a loudspeaker to a telephone termination within a small 1A1-Type Key Telephone System or a 112 key equipment installation.
- 1.02 The arrangement utilizes three standard 200-type key telephone units for either type of termination.
- 1.03 The leads associated with 112 key equipment are designated by option Y and the leads associated with 1A1 key equipment are designated by option Z.

SECTION II - DETAILED DESCRIPTION1. IDLE LINE CONDITION

- 1.01 In the idle line state, the receive pair of the transmission line is connected through normal contacts of relay CT to the associated FAA loudspeaker. The transmit pair is terminated in 600 ohms through contact B12 of relay TB and resistor T. All relays are in the unoperated condition in the idle state.

2. RADIO LINE PICKUP

- 2.01 The radio line can be connected to the attendant's telephone circuit by operating the associated pickup key. This action connects ground to the A lead through either option Y or Z. Relay PU operates to the grounded A lead.
- 2.02 Relay PU operated provides an operate path for relay CT, connects the attendant's receiver circuit to the line circuit through either option Y or Z and the R pad, connects the 1A1-type attendant's transmit circuit to the line circuit, completes the FW circuit for either of the attendant's circuit (to operate the 4-wire relay), disconnects terminating resistor R and connects the 112 key equipment attendant's circuit to the transmit line through option Y and the T pad and connects the lamp associated with the pickup key to lamp battery causing the lamp to light.
- 2.03 Relay CT operated transfers the receive pair of the transmission line

from the loudspeaker to the path already established to the attendant's receiver circuit.

3. PUSH-TO-TALK CONTROL - 1A1-TYPE TERMINATION (OPTION Z)

- 3.01 Relay TB operates when the push-to-talk switch is operated by the attendant. Relay TB operated disconnects terminating resistor T from the transmit pair, completes the transmission circuit to the attendant telephone circuit, and connects ground to terminal U of relay ON causing it to operate.

- 3.02 Relay ON operated connects the PT lead to the PT1 from the FAA radio equipment.

112 KEY EQUIPMENT (Y OPTION)

- 3.03 Ground is connected to the PT lead when the attendant operates the push-to-talk switch. This ground is connected through the PU relay to the winding of relay ON causing it to operate.

- 3.04 The PT and PT1 leads are connected as described in 3.02.

PUSH-TO-TALK RELEASE

- 3.05 The ON relay will release when the push-to-talk switch is opened. Relay TB will also release if operated as described in 3.01.

4. TRANSMISSION LEVELS

- 4.01 Pads T and R are provided to facilitate signal level adjustments as required.

SECTION III - REFERENCE DATA1. WORKING LIMITS

- 1.01 The lamp circuit limits station cable loops to 50 ohms.

2. FUNCTIONAL DESIGNATIONS

None.

3. FUNCTIONS

- 3.01 Functions are given in Section II of this CD.

4. CONNECTING CIRCUITS

4.01 When this circuit is listed on a keysheet,
the connecting information thereon is to
be followed.

- (a) Standard 1A1 Key Telephone System Telephone
and Key Circuits.
- (b) Standard 112 Key Equipment Circuits.

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