Federal Aviation Administration

EN ROUTE RADAR FLIGHT DATA CONTROLLER TRAINING

Lesson 2: *Voice Switching and Control System (VSCS)*

Version: 2019-12.1

FAA Course Number: 55053

INSTRUCTOR LESSON PLAN

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LESSON PLAN DATA SHEET

Course Name	Radar Flight Data Controller Training
Course Number	55053
Lesson Title	Voice Switching and Control System (VSCS) Equipment
Duration	1 hour plus TTL time **TTL Performance Assessment 1 is estimated to take an additional 30 minutes per student/instructor team.** Total duration will vary based on class size.
Version	2019-12.1
Reference(s)	TI 6690.17, Voice Switching And Control System (VSCS) Air Traffic Controller Operators Manual
Prerequisites	Web-based Training Course #57100 ATCS VSCS
Handout(s)	
Exercise / Activity	None
Assessments	Performance Assessment 1 - PA_L02: VSCS Checklist ⊙ Instructor must verify mastery of the objectives using the performance assessment checklist provided in this lesson plan. Students are required to demonstrate 100% proficiency with all checklist items. Those checklist items listed as "if applicable" are not required for facilities who do not have the capability to replicate that function. If the student fails to accurately complete any of the items on the checklist, the instructor must remediate by re-teaching the content. Instructors will then verify the student's mastery of the objectives using the performance assessment checklist. Students who are unable to demonstrate 100% mastery of the objectives will be referred to their Training Manager. End-of-Lesson Test – ELT_V1_02 **or** ELT_V2_L02 ⊙ There will a graded end-of-lesson test upon completion of this lesson. The score required for passing will be in accordance with current FAA directives.
Materials and Equipment	Access to VSCS training tool or console.
Other Pertinent Information	WBT course completion is required prior to ILT. The assessment portion of the WBT course is taken after ILT. This lesson is based on ERAM EAE130. The lesson has been reviewed and reflects current orders and manuals as of December 2018.

NOTE: *As you prep for this lesson, recall and be prepared to talk about examples and personal experiences that illustrate or explain the teaching points in the lesson.*

LESSON PLAN ICONS

	Description
	The Activity icon indicates an exercise, lab, or hands-on activity.
	The Discussion Question icon signals a discussion question to be asked to the students.
	The Handout icon indicates a handout is to be distributed to the students.
	The Instructor Note icon is in hidden text and indicates text that is for the instructor only.
	The Multimedia icon indicates a video or audio clip is in the presentation.
	The Phraseology icon indicates that phraseology is in the content.
	The QA icon indicates a question to be asked to the entire class by the instructor.
	Warning icon indicates a safety critical note.
	The WBT icon indicates a component of web-based training.
	The Click icon indicates a PPT slide with click-based functionality to present additional information.

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LESSON INTRODUCTION

Lesson Overview

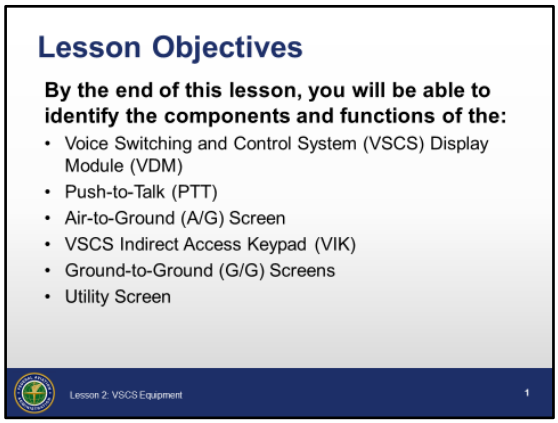
The previous lesson covered Air Traffic Service Routes and Airspace. This lesson covers the components, functions and operations of the Voice Switching and Control System (VSCS) located at control positions.

Knowledge of the VSCS is vital for your progression to Certified Professional Controller (CPC).

The more familiar you are with the equipment and its capabilities, the easier it will be for you to progress to the next step in training.

LESSON INTRODUCTION *(Cont'd))*

Lesson Objectives



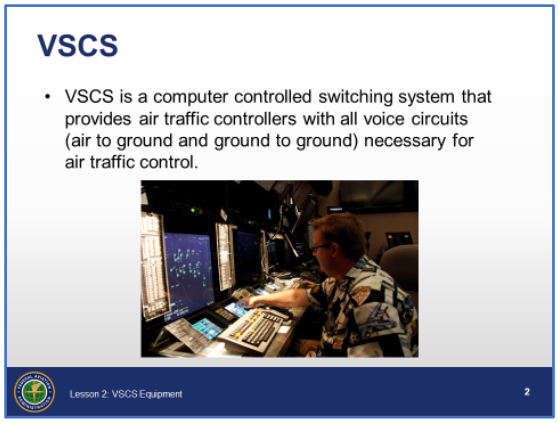
NOTE: *Review the objectives on the slide*

- By the end of this lesson, you will be able to identify the components and functions of the:
  - Voice Switching and Control System Display Module (VDM)
  - Push-to-Talk (PTT)
  - Air-to-Ground (A/G) Screens
  - VSCS Indirect Access Keypad (VIK)
  - Ground-to-Ground (G/G) Screens
  - Utility Screen
- There will be graded end-of-lesson tests. The score required for passing the end-of-lesson test will be in accordance with current FAA directives.

VOICE SWITCHING AND CONTROL SYSTEM (VSCS)

Voice Switching and Control System (VSCS)

JO 7110.65, Pilot/Controller Glossary

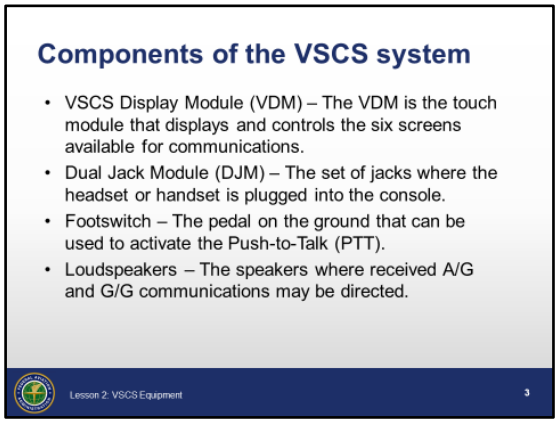


⊙ VSCS

- A computer controlled switching system that provides air traffic controllers with all voice circuits (air-to-ground and ground-to-ground) necessary for air traffic control.

VSCS
(Cont'd)

TI 6690.17
Section 3



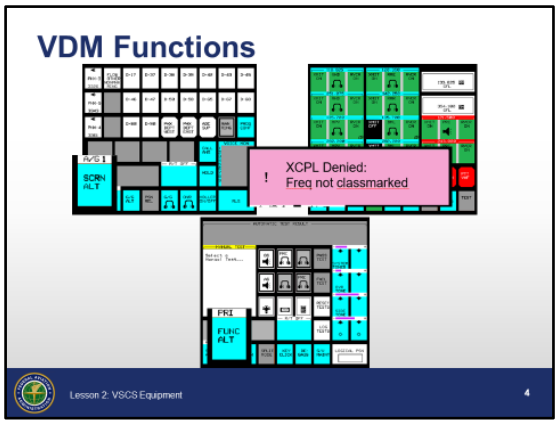
⊙ Components of the VSCS system

- VSCS Display Module (VDM) – The touch module that displays and controls the six screens available for communications.
- Dual Jack Module (DJM) – The set of jacks where the headset or handset is plugged into the console.
- Footswitch – The pedal on the ground that can be used to activate the Push-to-Talk (PTT).
- Loudspeakers – The speakers where received A/G and G/G communications may be directed.

VSCS DISPLAY MODULE (VDM)

VDM Functions

TI 6690.17 par 3.4.2.1



This slide is animated, 3 clicks.

- The VDM can display six different screens:
  - A/G 1
  - A/G 2
  - G/G 1
  - G/G 2
  - A/G Status
  - Utility (UTIL)

Click to zoom Alternate Screen (SCRN ALT) button.

- The Alternate Screen (SCRN ALT) button – Located on the primary and Alternate Function button sets of all VDM screens. This button provides the ability to switch to any of the six different displays.

Click to zoom Message Acknowledgement area.

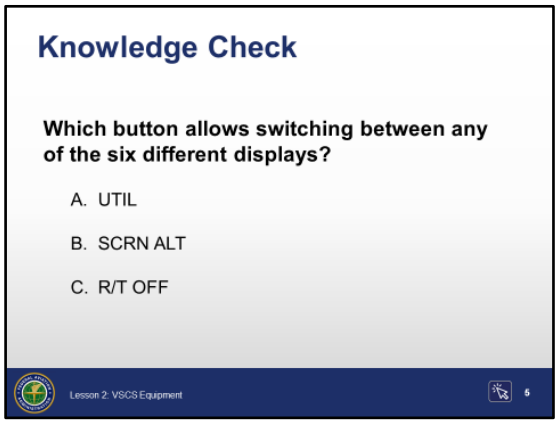
- The Message Acknowledgement feature – Acknowledges and removes VDM messages. This feature is performed from the VDM screen message area of all VDM screens.

Click to zoom Primary/Alternate Function (FUNC ALT) button.

- Primary/Alternate Function (FUNC ALT) button – Toggles between display of the Primary Function button set and the Alternate Function button set. This button is located on the Primary and Alternate Function button sets of all VDM operations screens.

KNOWLEDGE CHECK

Knowledge Check



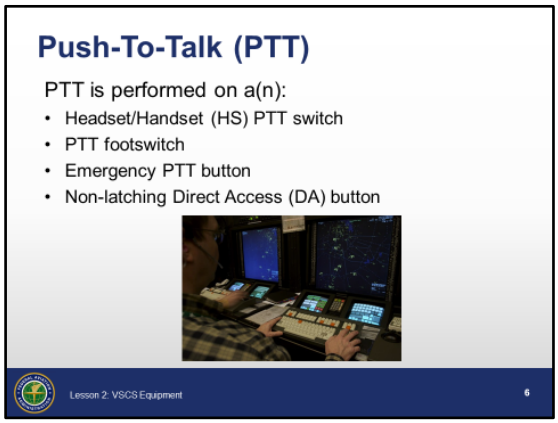
Q&A **Question:** Which button allows switching between any of the six different displays?

Answer: *B. SCRN ALT*

PUSH-TO-TALK (PTT)

Push-to-Talk (PTT)

TI 6690.17, par. 4.4



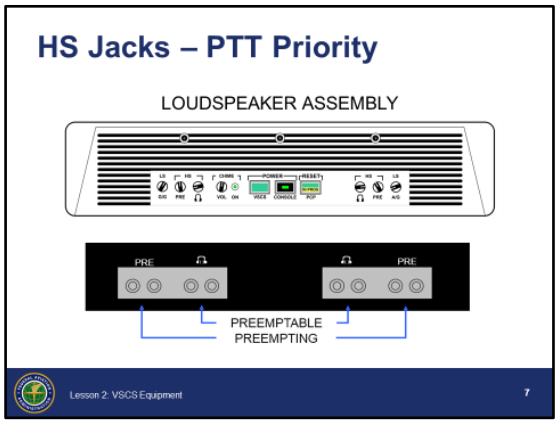
Push-to-Talk (PTT) activates outgoing A/G or G/G communication once a transmitter is enabled or an active G/G call is established.

- PTT is performed on a(n):
  - Headset/Handset (HS) PTT switch
  - PTT footswitch
  - Emergency PTT button
  - Non-latching Direct Access (DA) button
- A/G PTT
  - Activates once a transmitter is enabled and is performed with a HS PTT switch or footswitch
- G/G PTT
  - Activates outgoing G/G communication once an active G/G call is established from a latching DA button or the VSCS Indirect Access Keypad (VIK)
  - Performed on an HS PTT switch or footswitch

HEADSET/HANDSET (HS)

HS Jacks – PTT Priority

TI 6690.17,
par. 4.4.1.1.1

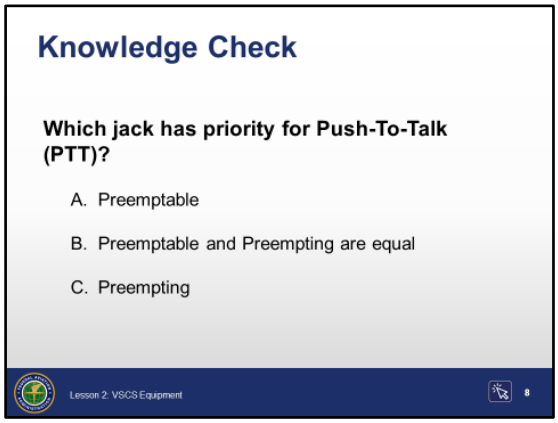


- When multiple HSs are plugged in, other operators at the position are affected by the local PTT priority rules for HS PTT switches and PTT footswitches.
  - The following HS Jacks have equal priority when paired:
    - Preemptable and preemptable
    - Preempting and preempting
  - When preempting and preemptable HS Jacks are paired, the preempting jack has priority.

One HS present, any jack	**Footswitch PTT**	• Footswitch will operate like the HS PTT Activation will cause voice audio to be transmitted from the Microphone.
Two HSs present in paralleled jacks Both preempting PRE OR Both preemptable	**Footswitch PTT**	• Both HSs will have active microphones. • Audio from both HSs microphones will be transmitted simultaneously.
One or more HS(s) in preempting jack PRE one or more HS(s) in preemptable jack	**Footswitch PTT**	• Footswitch controls HS in the preemptable jack. • PTT on preempting HS will override the HS in preemptable jack.

KNOWLEDGE CHECK

Knowledge Check



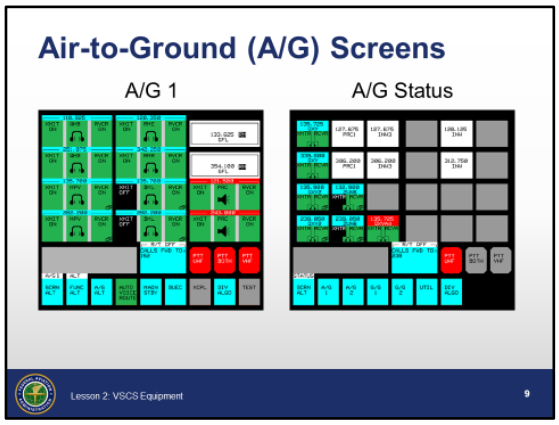
Q&A **Question:** Which jack has priority for Push-to-Talk (PTT)?

Answer: *C – Preempting*

AIR-TO-GROUND (A/G) SCREENS

A/G Screens

TI 6690.17,
par. 3.5

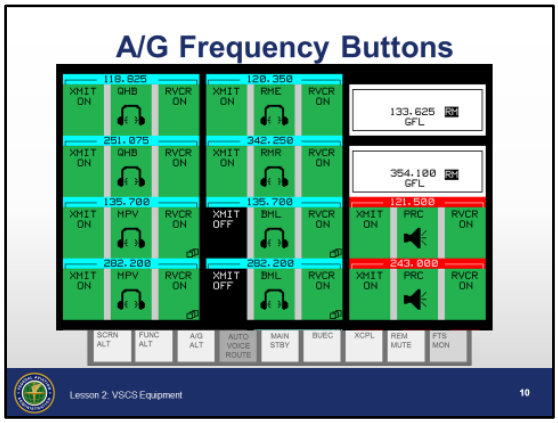


- Two A/G Operations screens, A/G 1 and A/G 2, enable operators to access A/G communications resources (frequencies).
- The A/G Status screen displays the status of both A/G Operations screens.
- Buttons specific to the A/G screens are:
  - Frequency Buttons
  - Emergency Frequency Buttons
  - Emergency Push-to-Talk (PTT) Non-latching Buttons
    - A non-latching button will perform a function only while touched. When released, the button changes back to previous state.
  - A/G Function Button

AIR-TO-GROUND (A/G) SCREENS *(Cont'd)*

A/G Frequency Buttons

TI 6690.17, par. 3.5.1

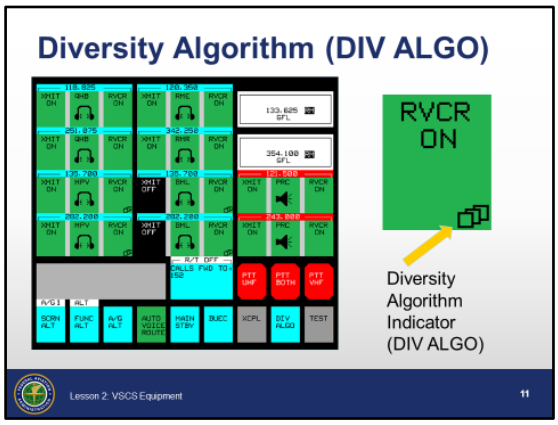


- Each screen displays up to 12 frequency buttons, enabling each position to access up to 24 A/G frequencies.
- Frequency buttons displayed are either:
  - Unassigned
  - Unselected
  - In selected frequency button group

AIR-TO-GROUND (A/G) SCREENS *(Cont'd)*

Diversity Algorithm Indicator

TI 6690.17, par. 5.6.5

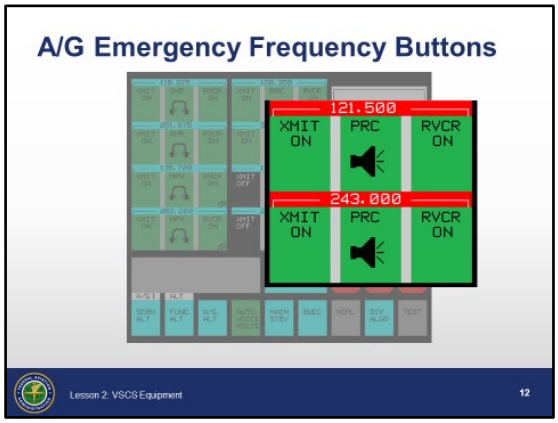


- Diversity Algorithm provides the ability for automatic receiver selection based on signal strength.
- When two receivers share the same frequency, and Diversity Algorithm is on, the receiver with the strongest signal is used.

AIR-TO-GROUND (A/G) SCREENS *(Cont'd)*

A/G Emergency Frequency Buttons

TI 6690.17, par. 3.5.2



- ⊙ Emergency Frequency Buttons
  - Function like the other frequency button groups
  - May be assigned to either or both of the A/G screens

NOTE: At least one UHF and one VHF emergency frequency must be selected in each operational area.

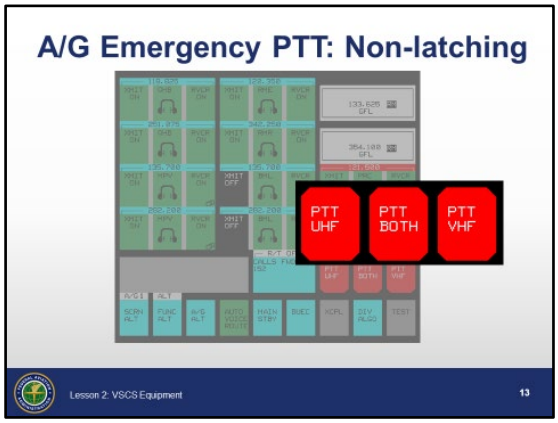
  - Are located on the:
    - A/G 1 screen
    - A/G 2 screen
    - A/G Status screen

- ⊙ To activate outgoing A/G emergency frequency communications press and hold an Emergency PTT button.

AIR-TO-GROUND (A/G) SCREENS *(Cont'd)*

A/G Emergency PTT: Non-latching

TI 6690.17, par. 3.5.3



- ⊙ Emergency PTT Non-latching Buttons
  - Are located below the frequency button groups on the A/G screens
  - Have a red background and cut-off corners
  - Activate the HS microphones at that position

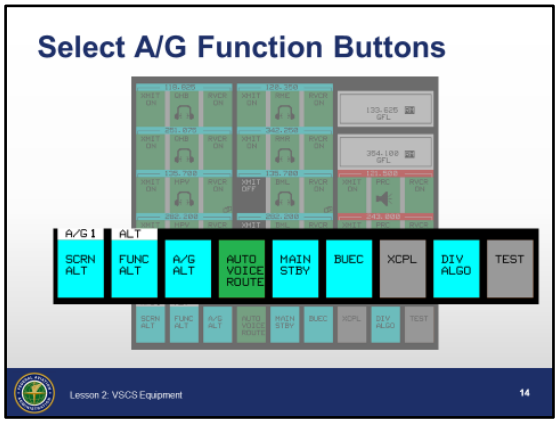
NOTE: PTT continues only as long as the button is pressed.

- ⊙ When emergency frequencies are assigned, these buttons activate PTT for all non-emergency frequencies with the transmitter on at the position and for either:
  - VHF emergency frequencies
  - UHF emergency frequencies
  - Both UHF and VHF emergency frequencies

AIR-TO-GROUND (A/G) SCREENS *(Cont'd)*

Select A/G Function Buttons

TI 6690.17, par. 3.5.4, 5.2.2



- A/G Function buttons control A/G communications resources and screen selection.
  - A/G Alternate (A/G ALT) button
    - Displays the alternate A/G screen
  - Automatic Voice Routing button
    - Directs all incoming A/G voice to the A/G Loudspeaker when G/G communications, are active.
      - Except for override calls and voice monitor

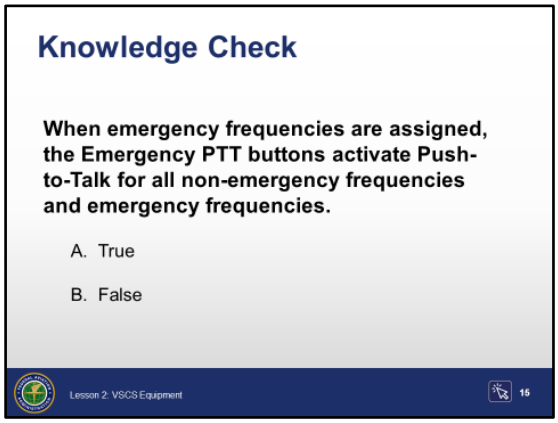
A/G Frequency Voice Routing Button

TI 6690.17, par. 5.2.2

- A/G Frequency Voice Routing button
  - Routes each frequency's received A/G communications to the HS or A/G Loudspeaker
  - Toggles between HS icon and loudspeaker icon

KNOWLEDGE CHECK

Knowledge Check

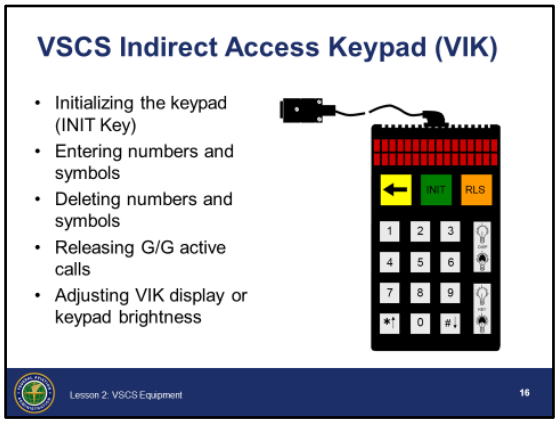


Q&A **Question:** Emergency PTT buttons activate Push-to-Talk for all nonemergency and emergency frequencies assigned to the sector.

***Answer: A**. True*

VSCS INDIRECT ACCESS KEYPAD (VIK)

VIK
TI 6690.17,
par. 4.2



The VIK is used for G/G communications and for controlling VSCS equipment at the ATC position. It operates similarly to a common telephone keypad.

The general functions of the VIK are:

- Initializing the keypad (INIT Key)
  - Displays READY on first line of VIK display
  - Illuminates numeric matrix and backspace key
  - Activates keypad
- Entering numbers and symbols
  - Number keys display digits on bottom line of VIK display as they are entered.
- Deleting numbers and symbols
  - Backspace (←) Key deletes
- Releasing G/G active calls
  - Release (RLS) Key releases calls and displays CALL RELEASED message on VIK for 3 seconds
    - Display clears and keypad is not active

Cont'd on next page

VIK *(Cont'd)*

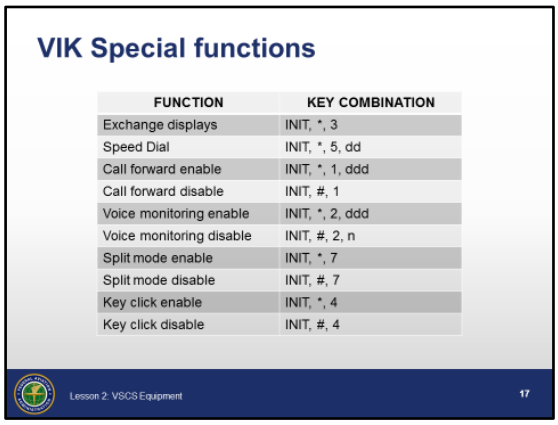
VIK continued
TI 6690.17,
par. 4.2

⊙ Adjusting VIK display or keypad brightness

- Display (DISP) and Keypad (KEY) Brightness Buttons increase or decrease the brightness on the VIK display or the backlighting on the keypad.
- The scale of total brightness is shown in the lower-right corner of the VIK display.

VSCS INDIRECT ACCESS KEYPAD (VIK)

VIK continued
Special Functions
TI 6690.17, par. 4.2



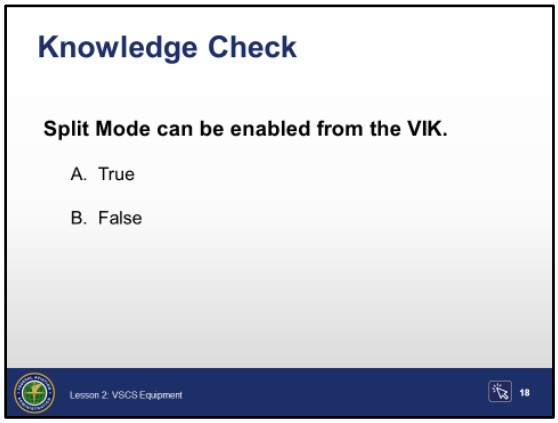
- In addition to general VIK operations, the VIK enables and disables special functions.

NOTE: The following table contains VIK shortcuts, which may also be accomplished using the VDM.

FUNCTION	KEY COMBINATION
Exchange displays	Init,*, 3
Speed dial	Init, *, 5, dd
Call forward enable	Init, *, 1, ddd
Call forward disable	Init, #, 1
Voice monitoring enable	Init, *, 2, ddd
Voice monitoring disable	Init, #, 2, n
Split mode enable	Init, *, 7
Split mode disable	Init, #, 7
Key click enable	Init, *, 4
Key click disable	Init, #, 4

KNOWLEDGE CHECK

Knowledge Check



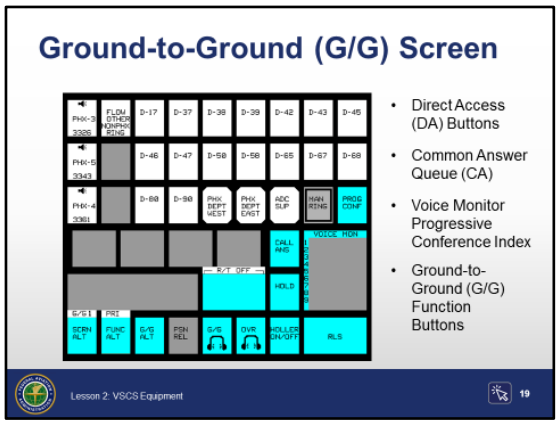
Q&A **True or False:** Split Mode can be enabled or disabled from the VIK.

Answer: *A. True*

GROUND-TO-GROUND (G/G) SCREENS

G/G Screens

TI 6690.17,
par. 3.6



- Two G/G screens enable operators to access G/G communications resources (landlines).

This slide is animated and will require 4 clicks to complete.

- Buttons specific to the G/G screen are:

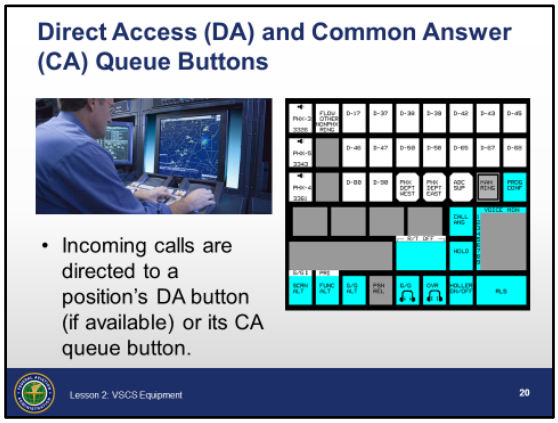
Each click highlights one of the following items.

- Direct Access (DA)
- Common Answer (CA) Queue
- Voice Monitor/Progressive Conference Index
- G/G Function

- G/G calls at an operational position may be:
  - Originated - Place an outgoing call from the position
  - Received - Receive an incoming call at the position
  - Managed - Placed on hold or disconnected from the position
- Only one call may be active at a time.
- Other calls may be:
  - Idle
  - Ringing
  - In progress at other positions
  - On hold

Direct Access (DA) and Common Answer (CA) Queue Button

TI 6690.17, par. 3.6.1

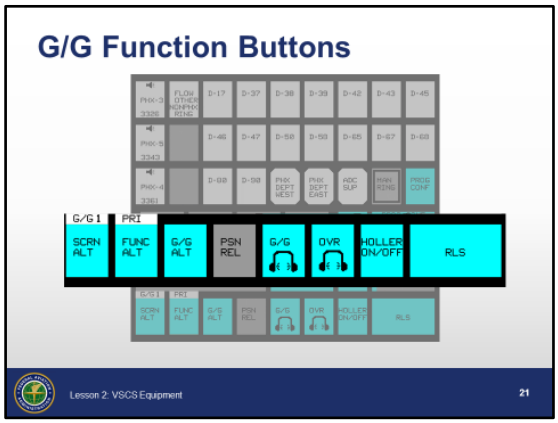


- DA buttons may be either latching or non-latching and are used to perform call:
  - Origination
  - Answer
  - Join
  - Hold
  - Release
- A single touch to an idle DA button initiates a call to a trunk or specific party identified by the button label.
- Incoming calls are directed to a position's DA button (if available) or its CA Queue button.
  - Touching the CALL ANS button answers the oldest call in the queue.
  - Up to four calls may be queued at a position.
  - Incoming calls are identified with an audible chime and the flashing amber background of the DA/CA buttons.
- Ringing indication may be displayed on the:
  - G/G ALT function button when a G/G call is received on the other G/G screen
  - SCRN ALT button when a G/G call is received and no G/G screen is currently displayed

G/G Function Buttons

TI 6690.17, par. 3.6.4

TI 6690.17, par. 6.2.1 through 6.2.6

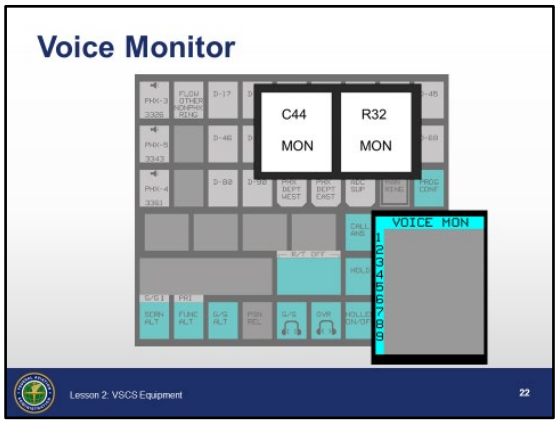


- G/G Function buttons
  - Control G/G communications equipment and screen selection
  - The ground-to-ground alternate (G/G ALT) button displays the alternate G/G screen.
  - The non-override ground-to-ground voice routing button routes all incoming non-override G/G voice to either the position HS or G/G Loudspeaker.
  - The ground-to-ground override (OVR) voice routing button routes all incoming override voice to either the HS or G/G Loudspeaker at a position.
  - Call Forwarding (CALL FWD) forwards all subsequent incoming G/G calls, except Interphone (IP) voice calls), to another operational position within the facility. This function may be performed from the:
    - VIK
    - G/G screen
    - Combination of VIK and G/G screen

    NOTE: An IP call is a call to an external facility. An Intercom call (IC) is a call between two positions within the same facility.
  - The Holler ON/OFF button enables or disables voice paging for selected voice call DA lines assigned to a position.
  - The Position Relief (PSN REL) button enables or disables an open microphone condition while simultaneously enabling or disabling the recording of all operator voice transmissions.
    - At least two HSs must be plugged into the DJM to make position relief available.

Voice Monitor

TI 6690.17,
par. 6.2.7

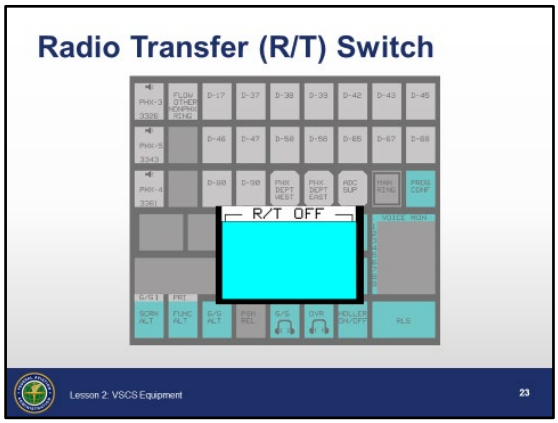


- Voice Monitor:
  - Enables or disables monitoring of voice communications received in the HS of another position within the same facility
  - May be performed with either the:
    - Voice Monitor DA button, or
    - VIK, by entering *2 and the appropriate position number
  - Indicates Voice Monitor and Progressive Conference Status

GROUND-TO-GROUND (G/G) SCREENS *(Cont'd)*

Radio Transfer (R/T) Switch

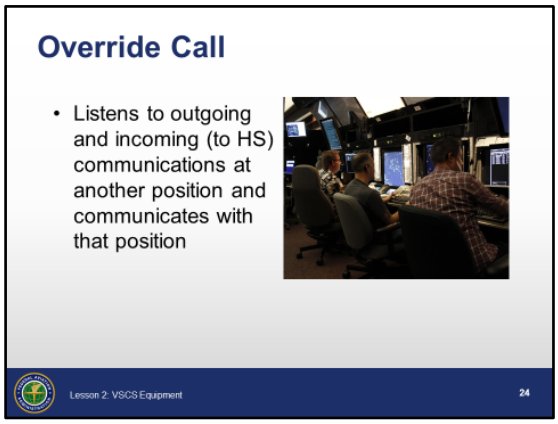
TI 6690.17, par. 6.2.8



- Radio Transfer (R/T) Switch
  - Routes all incoming A/G voice at a position to the position's A/G loudspeaker
  - When enabled, this function suspends all current voice monitors.
  - RT button displays RT/OFF when in normal operating mode.
    - Position hears incoming A/G transmissions through the headset or handset.
  - RT button displays RT/ON when all incoming A/G transmissions are routed to the loudspeaker.
    - Position only hears incoming DA line in the headset/handset.

Override Call

TI 6690.17 par 6.4.1 par 6.4.1.1 par 6.4.1.1.2

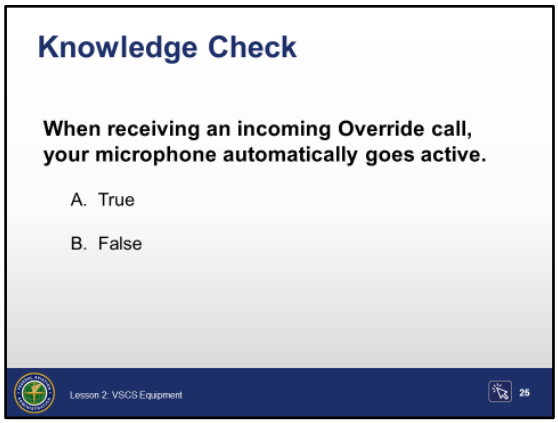


- An incoming Override Call will activate your HS microphone and you will hear all incoming and outgoing communication. The PTT does not need to be used.
- An outgoing Override Call will activate the other sector's HS microphone and you will hear all of their incoming and outgoing communications.
  - This function may be performed with either the:
    - DA button, or
    - VIK

NOTE: Communication with the Override Call will occur regardless of A/G and G/G activity.

KNOWLEDGE CHECK

Knowledge Check



Q&A **Question:** When receiving an incoming Override call, your microphone automatically goes active.

Answer: *A. True*

UTILITY SCREEN

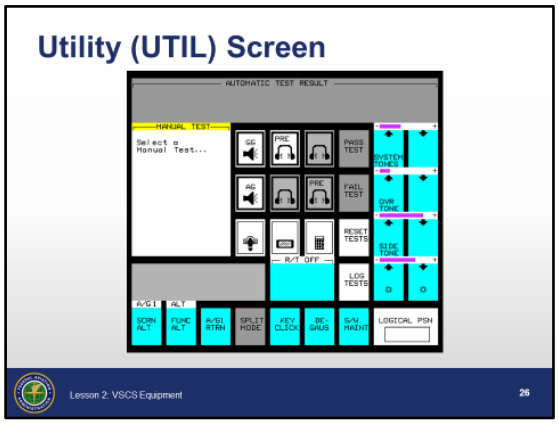
Utility (UTIL) Screen

TI 6690.17, par. 3.8

TI 6690.17, par. 3.8.2

TI 6690.17, par. 3.8.3

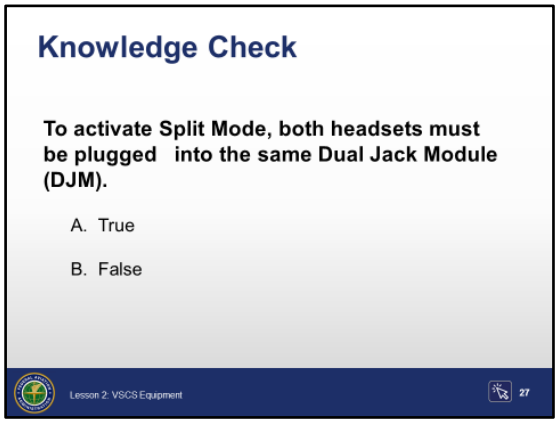
TI 6690.17, par. 7.2.2



- Operators use the UTIL screen for manual position equipment verification testing functions.
- Areas and buttons specific to the UTIL screen are the:
  - Automatic Test Result Area (not used)
  - Manual Test Area - provides basic instructions to the operator for completion and expected results of each manual test.
  - Position Equipment Verification Test buttons - used to verify the VSCS Console Equipment (VCE) is operating correctly.
    - The Headset and PRE buttons - show when a headset is plugged into the corresponding DJM and will send a tone to the headset when pressed. These buttons will also display the pressing of the PTT button on the handset.
    - The G/G and A/G loudspeaker buttons - show the speakers are present and will send a tone to the corresponding loudspeaker.
    - The Footswitch button - shows the footswitch is present and will indicate when the footswitch is pressed.
    - The VIK button - indicates the VIK is present and will send a test to the VIK.
  - Utility function buttons
  - Split Mode splits the ATC position functionality between operators plugged into separate DJMs.
    - Operators plugged into the left/right (facility-adapted) DJM access G/G communications, and operators plugged into the opposite DJM access A/G communications.

KNOWLEDGE CHECK

Knowledge Check

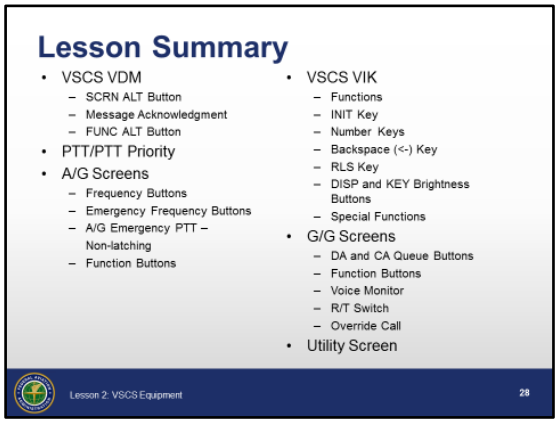


Q&A **Question:** To activate Split Mode, both headsets must be plugged into the same Dual Jack Module (DJM).

Answer: *B. False*

SUMMARY

LESSON SUMMARY



NOTE: *Review and elaborate briefly on the following:*

- VSCS VDM
- PTT/PTT Priority
- A/G Screens
- VSCS VIK
- G/G Screens
- Utility Screen

NOTE: *Ask students if there are any questions.*

- *Distribute Performance Assessment 1 (ELT01_L02): VSCS Checklist. Have students complete the exercise in TTL using a VDM, VIK, or both, as appropriate. Assist them as necessary.*
- *Administer end of lesson test (ELT01_L02), explain test passing score requirements, time allowed for completing the test, and other procedures for administering test.*

  NOTE: The score required for passing the end-of-lesson test will be in accordance with current FAA directives.
- *Provide feedback on missed questions, including a discussion to explain why particular answers are correct or incorrect.*

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PERFORMANCE ASSESSMENT 1: VSCS

Purpose

This performance assessment will provide an opportunity for the student to demonstrate proficiency in using VSCS

Materials

You will need the following materials for this exercise:

ELT02_L02 - Performance Assessment: VSCS checklist

Directions

This assessment cannot be completed in TTL. Facilities must use the VSCS training tool or an actual VSCS console. Provide the VSCS Checklist to student. Briefly discuss the Learning Objectives to be assessed, the requirements for passing this assessment, and the remediation strategy if mastery is not achieved. Those checklist items listed as "if applicable" are not required for facilities who do not have the capability to replicate that function.

This assessment takes approximately 30 minutes to complete.

- Using the VSCS Checklist, perform the following:
  - General VDM operations
  - General utility screen position operations
  - Utility screen manual test procedures
  - Frequency button operations
  - Function button operations
  - Air-to-ground communications
  - Ground-to-ground position operations
  - VIK operations
  - Ground-to-ground push-to-talk calls
  - Ground-to-ground position relief operations
  - Split mode operations
- Students must demonstrate 100% proficiency with all checklist items.

PERFORMANCE ASSESSMENT 1: VSCS CHECKLIST

DIRECTIONS: Complete the following actions using either the VDM buttons, the VIK, or both, as appropriate.

	Action	✔
	Util Screen	
1.	Navigate to the Utility Screen	
2.	Adjust SYSTEM TONES with up and down arrows	
3.	Adjust OVR TONE with up and down arrows	
4.	Adjust SIDE TONE with up and down arrows	
5.	Adjust BRIGHTNESS with up and down arrows	
6.	Enable and Disable the touch tone feature ***Key Click***	
	VIK	
7.	Change the VIK Display Brightness	
8.	Change the VIK Keypad Brightness	
9.	Remove a character on the VIK display	
10.	Remove all characters on the VIK display	
	G/G	
11.	Navigate to G/G1	
12.	Place an Override (OVR) call using the VIK and headset	
13.	Place an Intercom (IC) call Indirect using the VDM and handset ***(Intrafacility call)***	
14.	Place an Interphone (IP) call using the footswitch **(*Interfacility call)***	
15.	Describe the sound when receiving an intercom call ***G/G Chime***	
16.	Describe the sound when receiving an override call ***Override Connect***	
17.	**Complete if applicable at facility** - Initiate a Private Automatic Branch Exchange (PABX) call	
18.	**Complete if applicable at facility** - Explain how a Meet-me call works	
19.	**Complete if applicable at facility** - Explain how a Preset conference call works	
20.	**Complete if applicable at facility** - Explain how a Progressive conference call works	
21.	**Complete if applicable at facility** - Initiate a Combination call using a DA button and the VIK	
22.	Explain the functionality of the G/G Non-Override Voice Routing function button ***R/T On***	
23.	Explain the functionality of the G/G OVR Voice Routing function button ***HS/LS***	
24.	Enable the holler function using the HOLLER ON/OFF button	
25.	Toggle G/G ALT function button	
26.	**Complete if applicable at facility** – Place a call using the MAN RING function button	
27.	Answer a call using the CALL ANS function button	
28.	Enable and Disable voice monitoring at a local position	
29.	Call forward the position to another sector	

	Action	✔
	A/G Basics	
30.	Navigate to A/G1	
31.	Automatically route incoming A/G voice to LS ***AUTO VOICE ROUTE***	
32.	Identify unselected frequencies	
33.	Identify selected frequencies	
34.	Identify one VHF and one UHF frequency designator	
35.	Identify site name	
36.	Enable and disable a XMTR	
37.	Enable and disable a RCVR	
38.	Toggle the voice routing button between HS and LS	
39.	Place a XMTR in standby ***MAIN/STBY***	
40.	Place a XMTR and RCVR simultaneously in standby	
41.	Place a frequency site in BUEC	
42.	**Complete if applicable at facility** - Select the XCPL function button to establish a unidirectional cross-couple	
43.	**Complete if applicable at facility** - Select the XCPL function button to establish a bidirectional cross-couple	
44.	**Complete if applicable at facility** - Select the REM MUTE function button to remotely mute a receiver. Repeat steps to disable.	
45.	**Complete if applicable at facility** - Select the DIV ALGO function button to activate the diversity algorithm for a frequency group	
46.	Explain how to verify you are transmitting on an active XMTR? ***Visual Cue and Sidetone if utilized***	
	A/G Status Screen	
47.	Display the A/G status screen	
48.	Explain the functions on the A/G status screen and contrast differences between A/G1 and A/G status	
	Paired Frequencies	
49.	Identify a paired frequency site	
50.	Toggle the XMTR buttons on and off for both the VHF and UHF paired frequencies independently	
51.	Toggle either RCVR button for both the VHF and UHF paired receivers to turn on and off simultaneously	
52.	Toggle the HS/LS voice routing button of either the VHF or UHF paired frequency to change them both simultaneously	
	Multiple Frequencies At The Same Site	
53.	Explain why more than one frequency at a single site can function independently.	

	Action	✔
	Same Frequency At Multiple Sites	
54.	**Complete if applicable at facility** - Explain why multiple A/G sites having the same frequency can provide coverage in large/mountainous sectors	
55.	**Complete if applicable at facility** - Explain why enabling a XMTR at a Frequency/Site Group, the previously selected XMTR is disabled	
56.	**Complete if applicable at facility** - Explain why RCVRs are independent and more than one can be on at a time	
	Emergency Frequencies	
57.	Identify emergency frequencies	
58.	With non-emergency frequency sites disabled, activate the PTT on both UHF and VHF emergency frequencies	
	Deselect All Frequencies	
59.	Turn off both XMTR and RCVR to deselect all frequencies/sites	