



Commercial Radio Networks in US to Move to New Satellite in 2017

Action Required to Repoint or Replace Your Downlink Antenna

1. What is happening?

The satellite that the US commercial radio network industry has used for 35 years, currently known as AMC-8, at 139 degrees West Longitude has exceeded its design life and is not being replaced by an equivalent satellite at the 139 position. The radio networks must move to a new satellite at a different orbital location. **All radio stations who use programming from AMC-8 will need to re-point or replace their downlink antennas (dishes) in 2017.**

2. What networks are executing this plan?

The major US radio networks who operate uplinks - Learfield, Orbital Media Networks (OMNi), Premiere Networks, Skyview Networks and Westwood One - formed a group to learn what satellites would be available as AMC-8 reached end of life. The group contacted all three satellite companies that provide C-band service to the US and traded detailed specifications and business proposals to come up with a workable plan.

3. What about ABC and CBS? IMG College Sports?

ABC News is distributed by Skyview Networks. CBS News is distributed by Westwood One. IMG College Sports is distributed by Orbital Media. All three will move when their uplink distributors move.

4. What will the new satellite be called, and where is it in the sky?

The new main satellite for US commercial radio networks will be **AMC-18 at 105 degrees West Longitude**. AMC-18 has 5 years of useful life remaining.

AMC-18 will be replaced sometime in 2017 with an even newer satellite, **SES-11, at the same 105 location**.

Moving from AMC-8 (at 139) to AMC-18 (at 105) will require work by every affiliate. The second step, changing from AMC-18 to the newer SES-11, will not require any affiliate work because both are at the same 105 West location.

There will also be a backup satellite, SES-1, at 101 degrees West Longitude.

5. When is the earliest I can repoint my dish?

There will be an overlap period of several months during which the radio networks will provide service on both the existing AMC-8 and the new AMC-18 / SES-11. The overlapping service is scheduled to start on February 1, 2017, and is scheduled to end on or about June 30, 2017. These dates may change as we get closer to the transition. So the earliest you can repoint would be in February, 2017.



6. What happens if I don't repoint my dish by June 30, 2017?

If you do nothing, all network shows that are delivered via the AMC-8 satellite will go dark on your stations. This includes Rush Limbaugh, CBS News, Sean Hannity, NBC Sports Radio (Mike Florio, Newy Scruggs, Mark Malone), Talk Radio Network (Sam Sorbo, Roy Masters, Robert Davi), Skyview Networks play-by-play sports and news programming, ABC Radio, ABC News, Dave Ramsey, Westwood One News, Business Talk Radio Network [BTRN] (Ray Lucia, Business Rockstars), Michael Savage, Carson Daly, Sports Byline, Mark Levin, Sports USA, Touchdown Radio, Phil Valentine, CBS Sports Radio (Jim Rome, Doug Gottlieb, Damon Amendolara), Brownfield Ag News, Charles Osgood, Cigar Dave, Delilah, Glenn Beck, Doctor Oz, Big Boy, Steve Harvey, Learfield Sports, Bobby Bones, Dan Patrick, IMG College Sports, John Tesh, Nashville Hot Country, Ask Heloise, The Ray, Café Nashville, Rocky Mountain News Network, North Carolina News Network, United Stations Radio Networks' Nights with Alice Cooper, Lex & Terry, HardDrive XL, Open House Party, Westwood One 24-hour satellite formats and more than 1,000 other show titles that are delivered via AMC-8.

7. Are there any advantages or drawbacks to being on a satellite at 105 West instead of at 139 West?

Yes, both.

The good news -

- AMC-18 / SES-11 are higher up in the sky, roughly due south of Denver. This position is less likely to be blocked by buildings or trees to the southwest.
- The 105 West location requires your dish to look through fewer miles of precipitation to see the satellite. This is helpful for stations in the eastern US, who generally experience more rainfall than in the west.
- Sun transit outages in March and October will occur about 2.5 hours earlier in the day and will NOT fall during afternoon drive. For example, sun outages for the 105 West satellite downlinked at Boston will occur at about 3 PM EDT. For a downlink in Los Angeles, they will occur at about 11:30 AM PDT. (By contrast, on our current 139 West satellite, Boston experiences these outages at about 5:15 PM EDT, while Los Angeles sees them at about 2:30 PM PDT.)

SES-11, when launched, is a brand new satellite, but of a proven design that seems to have far fewer issues than the older AMC-8 design.

Potential issues –

The 139 West location is “the last house at the end of the street” so there is no neighboring satellite to the immediate west. This means that some affiliates whose dishes are damaged, distorted or are too small can get away with purposely mis-aiming their dishes a little too far to the west to avoid interference from the nearest easterly neighbor satellite at 137 West.

At 105 degrees West, we do not have this luxury. The nearest easterly C-band satellite is at 103 West, only 2 degrees away. The nearest westerly C-band satellite is at 107.3 West, only 2.3 degrees away.



The networks strongly urge all affiliates to install a dish that is 2-degree compliant (generally this means 3.7 meters diameter or larger) to make sure you can reject interference from these two adjacent satellites. This may require you to replace your downlink dish even if it is in good condition, but is too small.

8. Is the polarization setting the same as it was at 139 West?

We expect the downlink polarization for the new C-band transponders will be vertical, the same as is currently used for US radio networks on AMC-8. But because of the crooked look angles required to see any satellite, no two polarization angles are exactly alike, so you will need to adjust your feed element for minimum cross-polarized interference.

9. Will the L-band center frequencies of the network carriers be the same as they are now?

We will be on different transponders than we are now, so the L-band frequencies will change. Each network operator will publish their new center frequencies when the time comes. You'll need to set the center frequencies on your Wegener, XDS and STORQ receivers at the time you re-point (or replace) your dish.

The networks cannot just send a system-wide frequency re-tune command to all receivers at once because every downlink will be re-pointed on a different day. To ease this transition, the networks intend to use a "fallback carrier" feature which allows a receiver that has lost its satellite signal to automatically try to tune to a second frequency if the first one cannot be found.

10. I like the higher-up location in the southern sky, but in my case, I have a tree that will block reception from the new 105 location. What do I do?

You'll need to either trim or remove the tree, or relocate your dish. Consider the age of your dish as well. If it is 35 years old and is rusted in place, you may not be able to re-point it at all and you'll need to replace it.

11. Will the network distribution companies contribute money toward my efforts to cut down trees or to buy or relocate dishes?

Each affiliate should pay its own expenses. We realize the timing is not ideal, but affiliates should be able to budget this for 2017.

12. Can't the commercial radio industry just stay where it is now, at 139 West Longitude, until the radio advertising market gets better and radio stations have more cash?

We don't have that luxury. AMC-8 has exceeded its design life. Eventually, SES, the owner of AMC-8, will turn off the satellite. Network programming would go silent and would stay that way. AMC-8 will NOT be replaced at 139 West, so we need to plan for the demise of AMC-8 now.



13. Can't the US commercial radio networks use their market power to force one of the satellite companies to put a new satellite at 139 West?

No. The entire US commercial radio network industry takes up 77 MHz of satellite bandwidth. This is about 9% of the bandwidth of one 24-transponder C-band satellite, or about 0.4% of the total C-band bandwidth serving North America. That is not a lot of market power. Satellite operators like to see that 60% to 80% of their transponders are leased before they launch a new satellite.

14. Can't we just move all US commercial network programming distribution to the internet?

This may be possible, but the internet is not equal everywhere and some affiliates will not be served with live programs. There are still places in the US where the fastest internet download speed you can buy is 1 Mb/sec, which is not fast enough for multiple, live, broadcast-quality audio channels plus web browsing, e-mail and business applications. In some places, that 1 Mb/s costs \$110 per month, and has a limit of 12 GB of data per month with an overage charge of 1 cent per additional megabyte. For a cluster taking 2 stereo and 2 mono network streams 24 hours a day, assuming the slow 1 Mb/s data could even be made to work, that would be 188 GB per month, or over \$1,700 per month under this pricing plan. Replacing a dish would be cheaper.

Conveniently, satellite works best in rural areas, where high-speed internet is hardest to find.

The internet also has no Quality of Service. Nobody gets priority. Five audio streams reaching your radio station cluster are just as unimportant as 10,000 people watching Netflix and YouTube at home. When crises and breaking news stories occur, the internet slows down or stops, just when you want live news coverage on your station.

Over time, this situation will improve as internet bandwidth gets faster and cheaper, so internet delivery of live shows may be possible in a future year. Private, ground-based digital fiber networks (separate from the internet) may also become feasible in future years.

15. I have not bought or installed a satellite downlink in years. Where can I buy dishes and installation services?

SEG offers not only the products needed to replace any equipment; we also have the engineers on staff and in the field to help with dish alignment, installation of new dishes, dish moves and commissioning. Our dedicated Project Management team ensures your projects will continue to run on schedule through completion. SEG offers nationwide service.

Satellite Engineering Group, <http://www.sateng.com>, Monty Dent (303) 325-7404 or (913) 375-1100 ext 1146, mdent@sateng.com

16. Who can I contact at the networks with questions?

Learfield: Please call 573-893-1955 or e-mail Randy Williams rwilliams@learfield.com



800.932.1555

www.sateng.com

Orbital Media Networks (OMNi): For AMC-8 XDS networks and affiliates, call (303) 925-1708 option 1, or email support@orbitalmedianetworks.com . For antennas, LNBS, other parts, and installation services call (303) 925-1708 option 2 or email sales@orbitalmedianetworks.com .

Skyview Networks:

Technical Inquiries: Please call 877-503-8910 or email operations@skyviewsat.com

Premiere Networks:

Technical Inquiries: Please call 818-461-8373 or dishmove@premierenetworks.com

Westwood One:

Technical Inquiries: Please call 888-HELP-450 (888-435-7450). For Wegener- or STORQ-delivered programming, press option 1, then option 2, or email netops@westwoodone.com .

For XDS-delivered programming, press option 1, then option 4, or e-mail techservices@westwoodone.com